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ARCHITECTS will be anxious to learn the result of expert investigation of the causes which led to the fall of the Campanile in Venice. The newspapers seem to assume that the pile foundations gave way, either as a result of dredging in the Grand Canal, or, as one authority has suggested, through the effect of an earthquake. While an earthquake might possibly open a rift in the ground under the ends of the piles, and let them suddenly down, it is improbable that this would occur without the shock being felt to a certain extent in the neighboring soil; and the theory that the catastrophe was due to the undermining of the soil by dredging is also open to objections. Although we are gravely informed by one newspaper that "there are people who are saying that the subsoil of the city has deteriorated, and that the piles and pillars on which the buildings of Venice rest are rotting away," it is hardly necessary to point out that the "rotting away" of the "piles and pillars" of Venice is a phenomenon very little to be feared. A few years ago, some German engineers had occasion to remove the pile foundations of a bridge constructed by Julius Cæsar, about a thousand years before the Venetian Campanile was thought of, and the piles, after an immersion of nearly two thousand years, were found perfectly sound. It will be remembered, also, that the piles on which the lake-dwellings of Switzerland were built are still sound, after the lapse, probably, of at least five thousand years, and, perhaps, of a much longer period; so that, whatever may have been the matter with the foundation of the Campanile, it is very unlikely that the piles under it have "rotted away," or that those under any other of the ancient buildings are in danger of doing so, whether in consequence of "the deterioration of the subsoil," or for any other reason. If, on the other hand, the ground under the ends of the piles has given way, it is strange that the collapse of the tower should have been so sudden. Every architect who has practised in Boston or Chicago, or who has observed the old houses in Amsterdam, knows the effect of the yielding of the ground under a pile foundation. Far from collapsing suddenly, and letting the building over it come down with a crash, a subsoil overloaded in this way yields very slowly, for the obvious reason that the overloaded portions, pressed outward, must force their way gradually into the surrounding mass, whose inertia is increased by the weight of the water above it. In most cases years, and often centuries, pass before the effect becomes very noticeable, and, as the resistance of the subsoil is, practically, never uniform, the movement almost invariably takes the form of an inclination toward the softer part of the ground, which, at first hardly perceptible, increases very slowly.

IN the case of the Campanile, nothing of this kind seems to have occurred. The tower was practically vertical, and had remained so for a thousand years; and that the supporting earth should be so completely removed from under it in a few hours as to cause its total collapse, without any warning settlement, is hardly credible. Moreover, unless the failure of the subsoil took place uniformly over the entire surface of the ground covered by the piles, which is hardly possible, the tower would have sunk toward one side, and have fallen at length, instead of breaking down in a heap. Although it is hazardous to make guesses in regard to an occurrence at such a distance, it seems possible that the cause of the trouble might be found in the construction of the tower itself. Every one is familiar with the inclined plane, paved with brick, and supported by brick arches, which extended from the bottom nearly to the top of the tower, making some thirty-five turns. It is obvious that, in such a construction, the thrusts of the arches would, to a certain extent, accumulate from the top to the bottom, and, if the abutment should at any point be insufficient, the slightest yielding, by allowing the arch to flatten, would greatly increase the lateral pressure, at the same time that the abutment became less capable of resisting it. Most arched structures fail suddenly in this way, the first yielding of the abutment producing an increase of the thrust which carries everything before it. In the case of the Campanile, it is known that the walls were in bad condition, and they do not seem to have been improved by the cutting of a hole in the lower portion for the insertion of an iron beam, a proceeding which, as the newspapers inform us, caused the brickwork over the opening to "descend several inches"; and, the disintegration of the walls having once begun, the internal forces, no longer adequately restrained, would be sufficient to bring down the whole mass.

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THERE is something rather unpleasantly suggestive of Italian astuteness in the discussion which is going on in regard to the reconstruction of the Venetian Campanile. Offers of pecuniary assistance have been received from all over the world, and the amount of the subscriptions promised for the purpose is said to be something like half a million dollars. Meanwhile, as the newspapers inform us, the Venetian authorities seem to look on gloomily, and make estimates of the cost of rebuilding the structure, which, it is given out, will be twelve hundred thousand dollars. As the tower was forty-two feet square, outside, and three hundred and twenty-five feet high, to the top of the decorations which crowned its pyramidal roof, a simple calculation will show that this enormous sum would give nearly three dollars a cubic foot for rebuilding a very simple brick structure, almost perfectly bare inside, out of materials which lie scattered over the site, the bronze doors, and a large part of the marble decoration, being uninjured, and ready to be put back in their places.

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THE New York *Evening Post* speaks plainly and decidedly to the effect that appropriations of public money by Congress in aid of local "Expositions" should cease. Before adjourning, the last Congress appropriated more than six million dollars in aid of the St. Louis exhibition of 1904, and, if the affair should prove financially unfortunate, there is no certainty that appeals may not be made for still more money, as was the case with the Charleston Exposition, the gates of which were not even closed before its managers made an urgent demand upon the Government of the United States to make good the deficit in their accounts. If any such exhibition deserved to be helped in this way, it would be that at Charleston, where the people of a small city, nearly ruined by the concentration upon it of the destructive forces of the Civil War, made a brave and noble effort to claim again their place in the current of American life; yet the rejection of the petition by Congress was approved by most sensible people. The fact is that, as the *Evening Post* says, and as nearly all the most intelligent journals in the world have been saying for two years, every one is tired of great exhibitions. Even the Paris Exposition of 1900, although it enjoyed the great advantage of being held in a city which, alone, is a perpetual attraction to

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all civilized people, was financially a failure, at the same time that, by its wearisome extent, it did much to disgust people with great exhibitions in general. One of the most interesting portions of the Paris Exposition was the annex at Vincennes, where not only the cattle and farming appliances, but the balloons and automobiles were shown; yet there were practically no paid admissions to the annex, the visitors to the main exhibition, although the charms of the annex were described in posters which were everywhere spread before their eyes, finding themselves too much fatigued, in mind and body, to take the short trip to Vincennes. The St. Louis Exposition, almost necessarily, is planned on a larger scale than any which have preceded it, in order to give room for the constantly increasing variety of exhibits which will seek a place in it; and, earnestly as we wish that the fair, and the very interesting things which will be shown there, may be properly appreciated, it seems too much to hope that a sufficiently large number of people will brave the weariness of sightseeing in the midsummer climate of St. Louis to make it so successful, financially and otherwise, as it will, undoubtedly, deserve to be. Except for Government assistance, this would probably be the last general exhibition in America for a generation, at least; but there is danger that professional promoters, hoping to divert a portion of the public millions into their own pockets, will continue, on various pretexts, to apply to Congress for assistance in such affairs, to the injury of the public; and we hope that it may be made known to these speculators that no more appropriations of the people's money for such purposes can be hoped for.

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MR. BRUCE PRICE makes an excellent suggestion in support of the proposed amendment to the Building Code of New York, requiring woodwork in high buildings to be covered with metal. At present, the law requires woodwork in such buildings to be of fireproofed wood; but, as Mr. Price well says, architects have a certain distrust of fireproofed wood, the laboratory tests of which do not give very convincing indications of its behavior in a conflagration, while the various fireproofing processes are believed in the profession to injure, at least in some cases, qualities in the timber which are desirable. On the contrary, the covering of woodwork, particularly of doors, sashes and mouldings, with sheet metal has been practised for many years, with a success which is known to all architects; and there are very few of the latter who, if called upon to choose between metal-covered wood and timber treated by any process now in common use as a fire-resisting material, would not prefer the former.

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SOME time ago, in the discussion upon the best method of relieving the congestion upon the Brooklyn Bridge, it was proposed to equip it with a moving sidewalk, like those which formed the delight of children at the Chicago and the Paris Expositions. The idea was favored by the engineer to the Rapid Transit Commission, and by Mr. Lindenthal, the Commissioner of Bridges, and it is now announced that a company is ready to undertake the construction of such a sidewalk, as soon as the necessary concession can be arranged. The plan already worked out contemplates a main platform, moving at the rate of ten miles an hour, approached by three others, moving at rates intermediate between this and absolute rest. In this way the transition between the stationary platforms and those moving at the greatest speed would be so gradual as to obviate all danger. In Paris, there was only one platform moving at a speed intermediate between that of the main platform and perfect rest, and more than nine million passengers are said to have been transported without a single accident. Whether the dense crowd which covers the sidewalks of the Brooklyn Bridge in the morning and evening could be transported with equal safety is, of course, undecided, but there seems to be no serious reason for doubting it. We watched many times the operation of the Paris "Plateforme Mobile," and, although we often saw people lose their balance, and fall, in stepping from one platform to another, they were not hurt, for the simple reason that the worst that could happen to them was to be rolled off the more rapidly moving platform to the other. Being guarded by railings, they could fall no farther than to the platform; there were no crevices in which their feet or hands could be crushed; and the most distressing mishaps were those in which small children, accompanied by their papas, or mammas, or big brothers or sisters, failing to step in unison with them from one platform to another, found their guardians carried mysteriously away from them until the latter could jump back again and return to their charges.

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THE insurance-companies are studying the question whether a policy-holder can store a naphtha-burning automobile, or motor bicycle or tricycle, in the insured premises without vitiating his policy; and the answer to the question will interest a great many people. Few persons know how dangerous naphtha vapor is. According to one authority, if half a cupful of ordinary gasoline is thrown around the floor of a room of average size, and allowed to evaporate, and a lighted match is then thrust from the outside through the keyhole, an explosion will take place which will blow the windows out; and the same authority mentions an accident which occurred in Philadelphia, where a man in an upper story was cleansing a sofa with gasoline. The vapor of the gasoline descended the stairs, and reached a light sixty feet away. Instantly there was an explosion which blew out the rear wall of the house. It is not surprising that underwriters view with disapproval the storing of machines containing tanks of gasoline, held in, very frequently, by leaky valves, in rooms containing valuable property; and, while policy-holders who use automobiles will do well to study what their contract already says in regard to explosive fluids, it is likely that insurance boards will, before long, adopt some definite rules on the subject.

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SEVERAL of the daily papers mention the alleged discovery of "an alloy of nickel and steel" which does not expand with heat, and they inform their readers that this alloy would be an excellent material for boiler-tubes, "whose varying length tends to impair their connections and create leaks." It is extremely unlikely that anybody has discovered an alloy of nickel and steel, or any other substance, or mixture of substances, which will not expand with heat; but, in case any one should discover such an alloy, it might be well to observe that it would be about the most unsuitable material for boiler-tubes that could possibly be used. As boiler-tubes are firmly fixed at each end into the heads of the boiler, it is obvious that every time that a boiler fitted with such tubes was heated, and the steel or iron shell thereby expanded, the inexpansible tubes would all be pulled out of their connections. It is true that boiler-tubes often leak, but this is due to insufficient, rather than excessive expansion, and the perfect boiler would be one in which all the tubes expanded at precisely the same rate as the steel shell, and were always kept at exactly the same temperature with the shell, so as to avoid the currents of cold air, and irregular firing, which cause leakage at the connections of ordinary tubes.

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ONE member, at least, of the new administration in New York has earned the gratitude of his fellow-citizens by converting what has hitherto been a source of expense into a means of profit for the municipality. This official is Commissioner Woodbury of the Street Cleaning Department. Major Woodbury is, apparently, acquainted with the maxim that "dirt is matter in the wrong place," and has used his powers to redeem some of the dirt which New York gets rid of at such great cost, and put it into a position to be of value. In pursuance of this idea, he began, some time ago, to visit the various police-stations, and instruct the patrolmen in regard to the directions which they should give to housekeepers for separating ashes and garbage, which in New York, as in other civilized cities, are now required to be collected separately. The result of this sensible proceeding has been that ashes are collected from the houses almost clean, and, instead of having to be carried out to sea, they are available for any purpose to which inert mineral substances are adapted. In these days of "cinder concrete," there is a great demand for substances of this sort, which can be used, mixed with cement, for fireproof filling, and the Roebling Construction Company, finding the ashes, under the new system, clean enough to be so used, bought five hundred cubic yards, at eight cents a yard. As the cost of conveying this quantity out to sea would be sixty-five dollars, the net profit to the municipality in the transaction was one hundred and five dollars. As the quantity of mixed ashes and garbage sent out to sea before the inauguration of the new system amounted, on an average, to about seventy-five hundred cubic yards per day, the profit to the city, if it could all be disposed of in this way, would be nearly six hundred thousand dollars a year.

## LIBRARIES IN THE UNITED STATES.[1]—II.

### NEW YORK PUBLIC LIBRARY.

THE design for the New York Public Library, which is now being erected, is the result of two competitions held in 1896 and 1897. In the limited second competition twelve firms of architects were selected from those competing in the preliminary open competition out of a total of eighty-eight. Tentative sketches of the plans of each floor were issued with the instructions. The assessors (with those selected by the competing architects), Professor Ware, of Columbia University, Dr. Billings, the librarian, and Mr. Bernard R. Green, of the Congressional Library, finally selected a design which practically adopted the whole of these suggestions. There have been variations since made, during the preparation of the contract-drawings, but these have not been of great importance and will be noticed later.

The site is one that allows of an isolated building, between Fortieth and Forty-second Streets on Fifth Avenue, with ample space for future extension, 455 feet frontage and 482 feet to the sides. The cost of the building (without fittings, etc.) was not to exceed £340,000, but it will have greatly done so — nearly twice that amount.

There are many interesting points in the conditions of competition which are worthy of study. They are extremely minute in detail. The main points determined upon by the assessors and trustees in regard to the planning are important principles, which after great study and consideration they adopted, and these make the New York Public Library perhaps the most important library now being erected in the States.

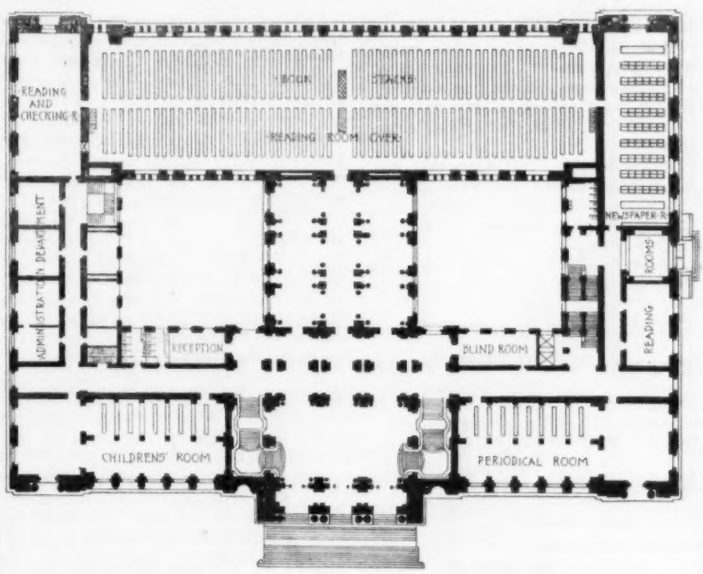
The following are three important conditions laid down, and they have not been essentially departed from, viz.: —

1. The stack was to be placed at the back, or west side, of the building, six floors in height.

2. The main reading-room for 800 readers was to be placed over it.

3. The lending delivery-room was to be placed in the basement, in the right-hand court, to be top-lighted and with entrance from the side street.

"By concentrating the book-stacks in a rectangular block on the west side, and placing the public reading-rooms above them on the third floor, with access to the stacks on each floor at the north and south ends and in the middle of the east side, the central supervision of the reading-rooms and the central delivery of books can be secured by very simple mechanism; free and direct communication between the administrative department and the book-stacks can be maintained and opportunity for easily extending both the book-stacks and the reading-rooms towards the west can be provided for whenever this may be desirable. Moreover, reading-rooms placed at the top of the building are not only quieter, better lighted, and more easily ventilated, but they can be constructed without encumbering the floor with columns." (Terms of Competition.)




New York Public Library. Messrs. Carrere & Hastings, Architects.

These are some of the advantages to be derived from the scheme, the adoption of which has resulted in a magnificent working-plan. They are immensely great, and if for one moment the plan of this library is compared with that of Boston it will be easily seen how rapidly the science of the librarian has developed. Of course, the Boston library was fine for its time. Both architects and librarians had to learn what was wanted. The library building as understood now in the United States, planned for its open-shelf rooms, rooms arranged for free access to stack, and well-fitted children's rooms, is quite a recent development, and each year progress is made towards the creation of the ideal plan.

The entrances to the basement are in Fortieth and Forty-second Streets: the one from the latter street (the north side) enters centrally and through halls directly into the lending delivery-room, 83 feet square. The west wall of this room has eight openings into the stack-room, and the delivery-counter will be placed just outside, extending the whole length of the room. The whole is top-lighted, the space above forming one of the two inner courts. Quite adjacent, between the delivery-room and the entrance, are placed the public lavatories and elevators and stairways to upper floors. The room to the north end of the stack is used for the patents-library: it is 36′ 6″ x 83′ 6″, and is really a continuation of them. The first floor of the stack is level with this basement floor. It is 297 feet long by 78 feet wide. The stacks are arranged in two rows, 5 feet centres, 7 feet 6 inches clear spaces next walls, and 5 feet central gangway north and south. The stairs are arranged at the two ends and the centre; the book-lifts are also placed in the centre of the room. There are altogether seven floors of stacks, each 7 feet 6 inches floor to floor, except the top, which is 8 feet 6 inches, to allow for extra depth of reading-room floor and arrangements for the mechanical book-carrier. The height of the basement is two floors of the stack; that of the first floor, three floors of stack; and the second floor, two floors of stack.

The left, or south, entrance is used for the administrative portion of the building, and has a driveway which leads directly into the court, balancing the court on the north side. This court will be used as the automobile station — automobiles being used for distributing to the branch libraries. It is on a level with the street outside. To the west of the drive is the packing and issue room, 36 feet 6 inches wide and 83 feet 10 inches long, with a room at the entrance to it 23 feet square. Either side of the driveway outside the main building — between it and Fortieth Street — are placed at the sub-basement level, which is 13 feet in height, the coal-room, 90′ x 32′, and the engine-room, 116′ 6″ x 31′, both top-lighted.

The printing-shop, the bookbinding-shop, and store, are placed in the front left-hand corner of the building, and occupy very large areas. West of these, and lighted from the south court, are the lavatories for the male and female employés, stores, workshops, scrub-women's room, etc., and the large space between the courts is assigned to the machinery.

On the first floor is arranged the very fine exhibition-hall, 75 feet square, placed directly opposite the main entrance between the inner courts. Either side of the great entrance-hall the stairways are placed to reach the second and third floors.

The children's reading-room and the periodical-room are placed to the right and to the left of the main entrance. These rooms, which are each 125 feet long by 45 feet wide, are practically divided into three separate rooms by piers — the portion away from the window being divided into alcoves by book-cases. The south-west corner and south side are occupied by the administrative and working departments. The large room next the stack is the receiving and checking room — the other rooms being the superintendent's offices, reception-room, telephone, stores, girls' and boys' lavatories — opposite children's room.

In the north-west corner, north side, are placed, next the stack, the newspaper-room, 111′ x 37′, two reading-rooms — one 46′ 10″ x 24′, the other smaller — stairways, elevators, and public lavatories, and also a room 46′ x 18′ for the use of the blind.

The second floor contains on the south side the administrative rooms and on the north side and central block, between the courts, the special libraries and their reading and study rooms. The administrative rooms are the accessions and cataloguing rooms, adjoining the south end of stack; and the order-room, trustees' room, directors' room, staff lavatories, etc. The room for documents is placed adjoining stack in the northwest corner, and there are special rooms for economics, science, Bibles, Oriental literature, with special reading-rooms and studies adjoining.

On the top floor the great reading-rooms, as before stated, are placed. There are four of them altogether. To reach the main one, the one second in size has to be crossed, and the other two are placed at each end of the main one. These end rooms can also be reached from the side corridors. Altogether they will make, perhaps, the finest suite of reading-rooms in the world. The main one is the same size as the stack-room below, 297 feet long and 78 feet wide. It is lighted by large semicircular-headed windows on the two long sides, each 14 feet wide, 8 feet 6 inches high from sill to spring of head, the sill being 15 feet from floor. The end rooms are each 36′ 6″ x 83′ 6″, lighted in a similar way on the outer wall. The room at the approach to the main room is 78 feet wide by 84 feet 3 inches long, and is lighted by similar windows on the two sides toward the courtyard. At present little or nothing has been settled as to the fittings of these rooms, so they cannot be described.

The other rooms on this floor are for manuscripts, rare books, Americana, prints, maps, music, art and architectural books, photographs, special reading-rooms, and public toilet-rooms. There are also four large art-galleries.

[1] A paper by Sidney K. Greenslade [*A.*], Pugin student, Grissell Medallist, Godwin Bursar, read before the Royal Institute of British Architects, Monday, March 17, 1902, and printed in the *Journal* of the Society. Continued from No. 1386, page 22.

Altogether this seems nearly as perfect a library as is possible. The magnificent group of reading-rooms on the top floor, with the huge stack below; the very fine approach to these rooms from the main stairways from the first to the third floor so arranged as not to return on themselves; the position of lending delivery-room — its very direct connection with the street and the stack, and its isolation; the arrangement of the children's room and periodical-room, with their separate stacks and easy access from the main entrance; the possibility of future extension of both main reading-room and stack-room easily assured without interfering with existing arrangements — are among the very many features that call for particular comment.

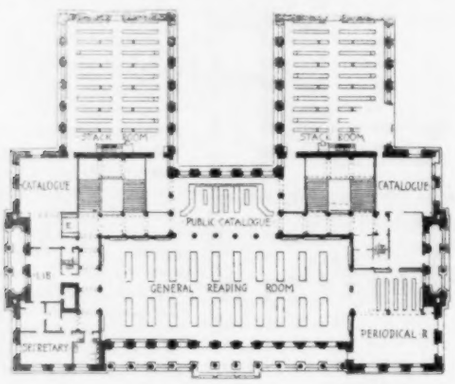
The cost will be about £660,000, and the shelving capacity is for 2,000,000 volumes. The architects are Messrs. Carrère & Hastings, of New York.

### THE STATE HISTORICAL LIBRARY, MADISON, WIS.

The State Historical Library building at Madison, Wis., is an extremely well-planned building, and forms an ideal reference-library. The main building has a frontage of 210 feet and a depth of 105 feet. At the rear of this project the two stack-buildings, each 100 feet wide by 110 feet deep. It consists of four floors and a basement. Three of the floors are devoted to the purposes of the library; the basement is chiefly for storage, particularly for newspapers, and the fourth floor is allotted to the museum and art-gallery.

The building is entered from each of the four sides, and two large staircases are arranged in similar positions either side of the main hall, which is placed centrally, leading to the upper floors. Adjoining these staircases are the public toilet and cloak rooms. The other rooms on this floor are the patents and public documents, 37′ x 45′, with two floors of stack to a portion of the room; the atlases, maps, and manuscripts, 26′ x 29′; current newspapers, 18′ x 24′; newspaper-files, 10′ x 32′; the stack-rooms, only one of which is at present built; and seven special study-rooms, varying in size and capable of shelving 20,000 volumes. This first floor is level with the first floor of stack, and each of the other floors of the building come every two floors of stack in height.

The book-stacks are each 48 feet wide by 60 feet deep, and consist of six floors, 7 feet 4 inches in height, fitted with steel stacks.




Second Floor: State Historical Society Library, Madison, Wis. Messrs. Ferry & Clas, Architects.

The staircases, elevators, and book-lifts are placed at the ends adjoining the main building. The stacks are placed at 5-foot centres, and in two rows across the building, each 18 feet long, with 5-foot central and wall passage-ways. Desks are provided for the use of readers given direct access to the shelves. Each floor of the stack will shelve 40,000 volumes.

On the second floor is placed the general reading-room, 48′ x 118′ and 30 feet in height, with 20 tables 12′ x 3′, each seating 12 readers. Around the walls are shelves for 5,000 volumes. The approach to it from the stairs is particularly good, as well as the position of the delivery-counters, and the delivery-hall with the public catalogues. These are all adjacent to the main reading-room, being separated by a row of columns, and are also quite near the landing-lobbies on either side. This delivery-hall is 50′ x 28′, and on either side of it are the issuing-rooms, 27′ x 10′, connecting with stack.

In the left wing are arranged the official catalogue-room, 29′ x 44′, with entrance to stack-room, the librarian's office, 15′ x 26′, with other offices, all adjoining.

In the right wing opening out of the reading-room, is the periodical room, 39′ x 45′, with its own double-storied steel stack placed in the rear of the room, the front portion being fitted up for readers.

On the third floor, owing to the general reading-room going up through the two stories, the floor-space is greatly reduced. In the left wing is the lecture-room, 30′ x 39′, to seat 200. Over the delivery-hall is a room for art and genealogy, 18′ x 50′, with two studies either side, and divided off from the visitors' balcony overlooking the reading-room by a low railing. In the right wing are six additional special study-rooms.

Ultimately the building will house 675,000 volumes.

Architects: Messrs. Ferry & Clas, Milwaukee.

### UNIVERSITY LIBRARIES.

The two buildings that are particularly worthy of attention are both in New York, the one belonging to the Columbia University and the other to the University of New York. They are not unlike in plan, both in general outline taking the form of a Greek cross. The great central reading-room, in one case octagonal and in the other circular, is the motive of the design in each building. Special study-rooms, with their books stacked around them, or near them, are an important feature of both these libraries, and in each are treated in a different way.

Often a special library-building is erected for a special subject. The recently-erected library of the Law School at the University of Pennsylvania, Philadelphia, is an interesting example.

### COLUMBIA UNIVERSITY LIBRARY.

The Columbia University Library building is, perhaps, the most monumental of those yet erected in the United States, the one at the sister university of New York being much smaller, and only in that way taking a second place. The outline of its plan is that of a Greek cross, the arms being very short and wide, the width across them being 200 feet.[1]

The great feature of the building is the magnificent domed reading-room placed at the intersection of the arms of the cross. It is octagonal in form, the four sides at the angles being shorter than the others, and the whole is covered by a great dome. The lighting is from four very large segmental windows following the lines of the main arches at the sides. These windows are in the outer walls of recessed spaces, following the arms of the cross, the outline of the main building.

The main entrance to the building is approached by terraces of steps, 52 altogether, through the magnificent entrance-portico of 10 Greek Ionic columns. This is on the main floor-level of the library. There are other entrances in each of the four corners of the building at the basement-level, and it is these entrances that are generally used by the students, who reach the library from various parts of the grounds. A staircase at each of these entrances reaches the great corridor which surrounds the reading-room, and from which it is approached by the reader from the side opposite the catalogue and delivery space, in the left-hand arm of the cross. This corridor is 10 feet wide, and is separated from the reading-room by four marble columns in each of its four open sides. Between these columns are arranged bookcases, forming screens between the corridor and the room. In two cases only are there openings, one opposite the main entrance, where a locked gate is placed, with plate-glass, so as to allow visitors to view the room without disturbing the readers, and the opening opposite the delivery-counter, for the use of the readers and attendants.

It was originally intended that the assistant-librarian's desk should occupy a raised position in the centre of the reading-room, as at Washington, but it was abandoned at his request, and it is now placed on the right of the entrance to the room, with staircase and lifts to stack-room below adjacent. The reading-room is 75 feet square, with octagonal angles, and accommodates 152 readers. The tables are arranged in concentric circles, four rows altogether. The readers on the outer ring have each allowed them a space of 2 feet 9 inches, the second row 2 feet 11½ inches. The tables from front to front are 5 feet. They are sloped slightly, and between each reader is a slight tapering division-bead. The oak bookcases in the reading-room contain 12,000 volumes, all reference-books, divided into various classes, each case being distinctly labelled. The large central octagonal case has shelves both inside and out, as well as a case within it in which the bound magazines and reviews are placed. The cases between the columns are placed on a marble plinth in the form of two steps 1 foot 9 inches high, the total height from floor being 10 feet 1½ inches to top of cornice, the height in the clear for books being 6 feet 6 inches. The spaces between the first and second steps of plinth are fitted with gratings for extracting the foul air from the room.

On the same floor as the reading-room the arms of the cross are arranged into the following rooms, viz, the entrance-vestibule, with the trustees' room on the right and president's public office on the left, occupy the south arm; the architectural library is placed in the east arm, with a separate reading-room, and balancing the latter are the Greek and Latin seminar rooms; the law library, with its conference-room and dean's office, is placed in the north arm; and the left is chiefly administrative — librarian's room, accession room, cataloguing and delivery and temporary periodical room, which eventually will occupy the space used by the law-library when a special building is erected for it.

The stack-room is placed in the basement under the main reading-room. The stacks are of oak, and run from north to south, with a 5-foot central gangway east to west. They are 18 inches wide and 2 feet 11 inches between. The shelves are 2 feet 6 inches long, having 2 inch divisions between them. They are $8\frac{3}{4}''$ x $\frac{3}{4}''$, the first one raised from the floor 3 inches. The floor to the second stack is of wood, carried on wooden joists. The height from the lower floor of stack to the floor of reading-room is 15 feet 4 inches. Each floor contains 75,000 volumes. These stack-rooms are inadequately lighted with borrowed lights from the corridors, and, therefore, have to depend on artificial lighting. There is also a stack-room below

[1] See plan and exterior view, *Journal* R. I. B. A., Vol. VI, pp. 220-21.

the law library, from which it is reached by stairs, with book-lift adjoining, adjacent to the attendants' desk.

The law library is 60′ x 37′ 6″; it is fitted with tables 2 feet 11 inches in width and 14 feet in length, 2 tables to each of the 7 rows. They are 4 feet 1½ inches apart, and seat 6 readers on each side. The room is panelled to a height of 7 feet 6 inches on window side and 10 feet 6 inches around the three other sides, with shelving fitted-in. Extra space for readers is obtained by a small iron gallery, about 5 feet 6 inches in width, placed around three sides of the room, fitted with 16 small tables accommodating 2 readers each. From this gallery doors on either side lead to the law-professors' rooms. The number of readers provided for is: in gallery, 32; main floor, 189; total, 221.

The architectural library is about 37′ 6″ x 65′, capable of shelving 12,000 volumes. It is divided into five bays by cases forming alcoves, and tables 3′ x 9′ are placed in each. Those next the outer wall are well lighted, but the ones in the inner alcoves are dark. The division cases separating alcoves next windows are 2 feet wide and 8 feet 11 inches to top of cornice. They have 4-inch panelled ends, and 2-feet 6-inch shelves in the clear between 1⅞-inch uprights, and are four divisions in length. The shelves are of ¾-inch wood, grooved for iron runners. Portions of the upper walls are also shelved, and where this occurs an iron gallery, 9 feet 4 inches from floor, is placed. The total height of room is 18 feet, and the accommodation provided is for 40 readers.

Over the architectural library and in the corresponding arm over the delivery-room are placed the seminar rooms, with their stacks. These are very well schemed. Each room is 12′ x 14′, and there are seven of them: the whole of them can be thrown into one room, being divided by 3-inch oak-framed divisions, which can be drawn out easily. On the inner sides of these rooms are arranged the steel stacks, with a passageway next wall, and from which, between the stacks, the rooms are reached. One table is placed in each room, 3′ 10″ x 7′ 6″, to seat 8 readers, and in a corner of each of the rooms is fitted a case with 12 locked drawers and 27 open pigeon-holes for students' papers.

There are two floors of stack, with a total capacity in each wing of 100,000 volumes.

On the third floor are the lecture-rooms. Eventually, the two wings over the seminar rooms will be fitted in a similar manner to them: at present they are only temporarily divided. The galleries to the main reading-room are at this level and are used partially for stacking books and for visitors viewing the reading-room. The stacks in these galleries are in two heights, and in the four contain 64,000 volumes.

Architecturally this building is very fine, and to obtain this fine effect it is evident that one or two utilitarian points have been rather sacrificed; this applies particularly to the arrangements for the storage of the books below the main reading-room, where light is greatly needed. On the other hand, the general arrangements of the reading-rooms with their fittings and the special study-rooms are all particularly good.

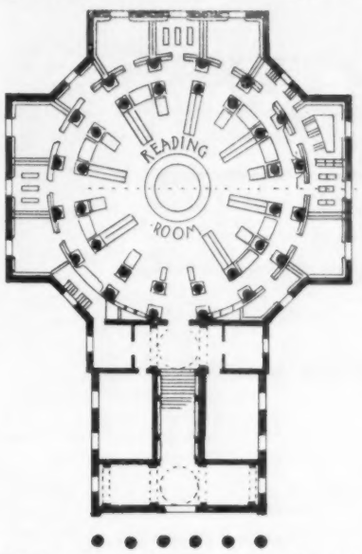
The total shelving-capacity for books is for 1,050,000 volumes, and the cost of the completed building was £240,000.

Architects: Messrs. McKim, Mead & White, New York.

### NEW YORK UNIVERSITY LIBRARY.

The Library at the New York University is much smaller than the Columbia University Library, and the scheme of the plan is decidedly more compact. The general outline — that of a Greek cross — is the same, the entrance-arm being longer than the others. The extreme width of the building is 102 feet, and from the outer face of the column of the portico to the west wall 160 feet. As in the Columbia Library, the great feature is the domed reading-room, but it is circular on plan instead of being octagonal, and the books are stacked round about it and not below, and, are, therefore, generally more accessible. The main entrance is from the east front, and from the large hall, with its staircases either side leading to the auditorium below, a broad marble staircase of 24 steps 12 feet wide leads to the reading-room. Before the reading-room is entered a small domed vestibule is reached, and from it to the right and to the left are the chancellor's and librarian's rooms, and over these rooms are the two cataloguing rooms and the periodical and newspaper reading-rooms.

The reading-room is 54-feet 3-inch diameter to the inside face of the 18 marble columns, and has an ambulatory around 5 feet between the faces of the columns. Between the columns glazed cases for large books or portfolios of the same height as the tables are arranged, so that readers in reaching their seats do not disturb one another, the approach to the tables being only between certain of the columns, conveniently arranged near the stairs to the seminar rooms and the main entrance to the room. The central portion of the room is occupied by a circular table 20 feet in diameter, seating 24 readers. There are besides 8 tables 12′ x 3′ 8″, each seating 8 readers: these are placed radiating towards the centre, and between these long tables are smaller ones, 3′ x 5′, each seating 4 readers, the seating-capacity of the room being for 120 readers. The delivery-desk is placed facing the ambulatory and occupies the second bay to the left on entering; adjacent to it are the stairways leading to the various seminar and reading-rooms, and it has telephone-connections with all the rooms in the building. The two bays either side directly on entering are fitted for the card-catalogue, and suitable tables for its use are placed adjacent. The whole of the space between the columns of the wall of the ambulatory is shelved for books. It is three tiers in height, each 7 feet 6 inches, with galleries over the ambulatory to the second and third floors. The first galleries are arranged between the columns, one to each bay, and only project slightly. Each bay is divided into three divisions vertically, the central division being hung as a door and opening with all its books inwards. The second gallery, with its glazed floor, goes around the whole room, and nearly projects to the outer face of the inner columns. Thus, nearly the whole of the circular wall of the main reading-room has been utilized for the storage of books. The doors leading to the book-rooms are themselves book-stacks swinging on central pivots.




Main Floor: New York University Library, New York N. Y. Messrs. McKim, Mead & White, Architects.

Around the base of the dome is another gallery where thousands of books, when necessary, may be shelved. Unlike the Columbia University reading-room, here the lighting is by a circular skylight 20 feet in diameter in the centre of the dome.

From the ambulatory on the main floor and the galleries on the third and fifth floors are arranged 18 seminar rooms, which are devoted each to a special subject. As will be seen from the plan, these rooms are curious in shape, averaging 18′ x 14′, each provided with 2 tables, 3′ x 5′, for 4 readers. Shelving is placed all around the room, and at a height of 7 feet 6 inches, a glazed gallery with more shelving and stacks projects from each wall. The capacity of the shelving already installed in the building is for a quarter of a million volumes. Should it be necessary at any time to increase the shelf-room, this can be done by using the large auditorium below the reading-room for stacks, and would give the library a total capacity of a million volumes. The galleries to this auditorium are sometimes used as a reading-room.

The principle of the seminar rooms is excellent. They are very conveniently arranged, but the shape of them is awkward and the size small, and the upper ones with the top lighting become very hot in the summer.

The arrangement of shelving between columns to circular wall of reading-room, with the galleries for approaching it, is very well managed, and the effect good. The position of the card-catalogue so near the entrance and the way it is fitted into the wall is most convenient.

Architects: Messrs. McKim, Mead & White, New York.

### PENNSYLVANIA UNIVERSITY LAW LIBRARY.

The library of the Law School at the University of Pennsylvania has a remarkably well-arranged and convenient plan. It is a building of two stories, with a frontage of 175 feet and a depth of 105 feet. Practically, the whole of the first-floor plan is occupied by lecture and class rooms, and it is the second-floor plan, where the book-stack and reading-rooms are placed, that calls for comment.

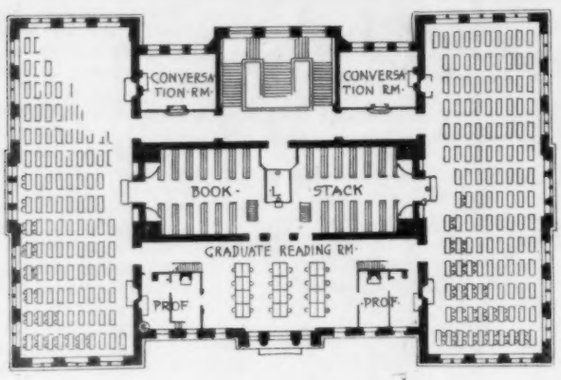
The book-stack occupies the centre of the building, there being entrances to it from each of its four sides, the landing of main staircase, the two large undergraduates' reading-rooms at each end of it, and the graduates' reading-room opposite the staircase and entrance. To the undergraduates' reading-rooms are delivery-counters, 2 feet 4 inches wide and 2 feet 9 inches high, and with gates at sides, each with an attendant. From the graduates' room there is free access to the stack-room.

There is room for five floors of stacks: at present, only one floor is fixed. The width between stacks is 3 feet 6 inches and the central gangway is 7 feet 6 inches. The librarian's office is placed in the centre and is enclosed by glazed screens. The whole is top-lighted the full length, the roof being a simple steel-trussed one, and additional light is obtained for the two top floors by windows over the main staircase. All the entrances from reading-rooms to stack-room have two iron shutters.

Either side of the main staircase are two conversation-rooms, each 22′ 6″ x 18′. The two large undergraduates' reading-rooms are each 42′ x 100′, well lighted on three sides. Each room is fitted with 126 dual desks for 252 readers. These desks are 5 feet 4 inches long, 2 feet wide and 2 feet 6 inches high. The space between front to back is only 1 foot 8 inches and the gangways between them 2 feet 5½ inches. Each desk has two locked drawers, and is fitted with a small brass upright ticket-holder and electric-bell to delivery-counter. A book being wanted by a reader, the ticket with number of desk is

inserted in the holder, and the bell to the attendant's desk rung, which gives the number of row of desk; a boy is then sent to collect the ticket, and the book is brought without the reader being disturbed. The desks in these rooms are much too crowded.

The reading-room for the graduates is much smaller — only 27′ x 48′, accommodated to seat only 24 readers. The desks are arranged




First Floor: Library of the Law School, Philadelphia University, Pennsylvania. Messrs Cope & Stewardson, Architects.

in 3 rows each, seating 4 readers on a side: they are 5 feet wide and 18 feet long. There are 3 drawers to each desk, the tilted drawers for books on the left of the reader being a particularly happy idea: practically, it forms a shelf for 8 or 9 volumes without crowding the desk. The lavatories are arranged in a mezzanine floor off the half-landing. There are 4 professors' rooms either side of the graduates' reading-room and 4 more over them. A gallery connects these upper rooms with the stack, passing through the graduates' reading-room.

Architects: Messrs. Cope & Stewardson, Philadelphia.

[To be continued.]

## PARIS

### ARCHITECTURE AT THIS YEAR'S SALONS.

A LITTLE while ago, M. de Baudot held a "conference" on contemporary architecture. It troubled him to see that our times had no new style of architecture, seeing that it had at its disposal new kinds of material which could lend themselves to new forms. He was wrong in not doing justice to the efforts made to get away from the superannuated Classic style which lends itself ill to the solution of modern programmes. The Guimards, Sauvages, Plumets and many another have sought, and sometimes have found, new forms. M. de Baudot himself has indicated what paths might lead to the creation of the style of our times. But one must know how not to be too exacting at the start. We are passing through a time of transition, whence, perhaps, something will issue. We must know how to wait. In this connection, and from the modern standpoint, the small amount of architecture exhibited at the Salon of the Société Nationale is far more interesting than the great quantity of banalities hung on the walls of the Artistes Français.

Making exception of the archæological work by M. Eustache, and the restorations of the ancient theatre of Louis by MM. Gaudet and Prudent, making exception also of a quantity of beautiful water-colors which are agreeable to the sight, there remain but a few good studies and these are little calculated to revolutionize the art. There are some which make us share the regrets which M. de Baudot expresses. Take the case of M. E. Meyer, who was called on to solve a programme which was essentially modern, — a sanatorium, and more than this, this sanatorium was to be built in the environs of Paris. Here was the very chance to seek for something new. The sanatorium is a new thing, and the present demands of hygiene have not been satisfied by the solutions of former times. Now, what does M. E. Meyer do? He draws his inspiration from Arabian architecture, and makes a mosque with flat roofs, small cupolas and minarets. No element of the style is lacking. Everything is very pretty, very brilliant, well studied, but deplorable from the chief point-of-view. But, my dear M. Meyer, we are not in Algeria, we are in France, in the environs of Paris, and this is the year of grace 1902.

The *hôtel* built by M. Guinot is also a very interesting study in modernized Renaissance. But consider how very contradictory are these two words, one beside the other. The architect who, in 1902, makes a Renaissance façade must, behind these walls, which belong to another epoch, satisfy the tastes and needs of the day, and prepare a modern plan. There are very many chances if a Parisienne is to inhabit this *hôtel*, that she will introduce in it a certain element of the "new art," certain chiffons, certain pieces of furniture with which the Renaissance style will surely make *mauvais ménage*. Just as it is interesting to come upon a building, Renaissance or of any other style you please, dating from a given epoch, and giving us, in consequence, information concerning it, just so it is useless to copy it, or which is worse, to draw inspiration, from the styles of antiquity in satisfying modern needs.

A villa at St. Cloud, by M. E. Arnaud, deserves attention for the ingenuity and good sense shown in its composition. Another, by M. Sauvestre, on Lake Léman, shows that architects can very easily discover elegant and interesting forms, without borrowing them from past times.

Scruples overcome me as I formulate these criticisms. Am I not unjust towards certain of my confrères who have had to yield to the demands and caprices of their clients? It is plain that it is difficult for an architect to build a "modern" villa for a client who demands a Renaissance *hôtel*. I do not deny these difficulties which paralyze one's efforts and intentions. The right of the client who pays the bills cannot escape recognition, and M. Guinot may have been obliged to submit himself to them. But M. Meyer would have difficulty in making me believe that any one demanded he should prepare a Moorish construction to shelter a sanatorium in the environs of Paris. We ought to combat a certain kind of ideas which our clients may have, but we should not be the first to drag them into paths of illogicality and absurdity. And unfortunately, we find at the Salon des Artistes Français some deplorable examples.

Many artists have protested against the scheme for the construction of a bridge over the Seine, where it would mask the marvellous perspective of the Cité from the Pont Neuf. What must one think of an architect who not only accepts this idea, but still further aggravates it by adding at the very middle of the bridge a mediæval tower, which will not only mask, but entirely suppress, with a single stroke, the graceful silhouettes of the Palais de Justice, of the St. Chapelle, and of Notre Dame. I do not care to give the name of the author of this vandal proposition, but I am sorry that any such idea could have sprung from the brain of any architect, and I declare that our artistic education has very far to go before the renovation desired by M. de Baudot and many others is accomplished.

M. Picq is much chagrined over the desertion that has befallen the garden and galleries of the Palais Royal. Formerly the centre of life and movement, they have become dead and deserted. M. Picq would like to resuscitate them, and exhibits a means of doing this as conceived by him: large openings on the streets neighboring the garden which at present is enclosed by buildings, creation of rampes accessible to carriages, etc. This attractive scheme may perhaps be realized, but it is not likely that it will be undertaken immediately.

Before finishing this brief account of the Salons of 1902, it gives me pleasure to say that the remarkable work by M. H. Eustache has been awarded the medal of honor at the Salon des Artistes Français. For their very interesting restoration of the Salle de Louis, MM. Paul Guadet and Prudent have obtained a first medal. The same recompense has been awarded to M. Bruel, for a restoration of Roman buildings in the southwest, and on the Palatine.

At the Congress of 1902, the Société Centrale des Architectes has, for its part, awarded grand silver medals to M. Eustache, and to MM. Paul Guadet and Prudent. So these artists, at least, have not seen their efforts pass unrecognized, a thing which, alas, does not always happen to architects.

## CHICAGO, FIFTY YEARS HENCE.

"WITH about two years' residence in this city, I think our President must have meant to be funny when he called on me for 'Reminiscences of Early Engineering Works in Chicago.' But time has no beginning and no end, and past and future are but questions of the point from which you take them. To meet the challenge, then, I will simply shift this point to 50 years ahead, and speak of the 'Early Engineering Works in Chicago' from a standpoint in the middle of the century.

"I would first note, what perhaps is of most interest to those present: the way the city got its subway. The matter was discussed in the early part of the century. The city-engineer had one plan and other engineers different plans, but the telephone-companies, gas-companies, electric-light companies, water-pipes and sewer-mains went right ahead and used up all the space underground, so that when the public decided to do something there was no space left underground to do it in. This was a difficulty until an engineer of that day suggested that, as they could not make a subway below the ground, it would be just as well to put the sidewalks of the city up about 15 feet higher and have a subway already excavated, with the ground-floors of the tall buildings as basements.

"As the municipal street-car service of that day had a time-card of about an hour from 39th Street to Adams Street, it was very desirable to have the air-spaces between the raised sidewalks to sell to a new traction-company that would really fill some of the requirements of rapid transit. This, when sold, brought so large a sum that those who worked it through the Council actually could not get all of it, and the city then found itself in possession of a large sum to spend on improvements.

"The first thing to improve at that time was the Chicago River,

which had been so improved by the Sanitary District that its condition was intolerable. An expert commission was appointed to consider this problem, and a venerable member of that commission organized a search into the old files of the District. This unearthed a report of L. E. Cooley's of 1901, which covered the ground very thoroughly, and the commission made quite a reputation by recommending it. The work was carried out substantially on the project outlined by Mr. Cooley a quarter of a century earlier.

"Following this, it began to be apparent to the Government that an 8-foot waterway in the Illinois River was hardly suitable to connect with the 24-foot waterway across the Chicago divide. At that time, also, the position of Congressman was so much less profitable than that of Alderman that it was not difficult to get really intelligent men to send to Washington, and the interests of Chicago in a waterway to the Gulf began to be considered. The improvement of the Illinois River was developed just as it had been outlined in the ancient history of 1885.

"The lake-to-the-gulf waterway had quite an interesting history. The thousand miles from Cairo to New Orleans had been improved so greatly, at an expense of some eighty million dollars, that the depth was about 3 or 4 feet less than when the work was first started. There had been built an earth embankment along the river, shutting off the floods from the bottom-lands, and the high-water flow-line had risen until it was about up to the eaves of the houses of the people behind the levees.

"In that chapter of accidents which make the great floods of a river, the spring rains and melting snows came down the frozen slopes of the Allegheny, just as heavy rains in the northwest brought the Missouri and Arkansas in flood to join the Ohio, while warm weather in the lake district sent down the spring floods from the upper Mississippi and Illinois rivers. The earth embankments of the lower Mississippi went down before this combination, and the flood-waters swept over a thickly settled and highly cultivated district 40 to 60 miles wide and 500 miles long, from Cairo to the Gulf.

"This was the end of the plans of the Mississippi River Commission and a more rational project for improving the river and protecting the valley was adopted. In this a deep waterway was easily secured and finally joined to the improvement of the above from Chicago to the Mississippi.

"It is only recently that I went down the line in an ocean steamer and saw this dream of the centuries realized. But the weight of years was upon me and I was alone with the memories of its beginnings; perhaps it was malaria; but I summed up the history as follows: A great work is a great misfortune to the engineer who has the bad luck to first conceive it. It drives him to a life of effort without reward; dooms him to continued disappointments, and promises him that he will never live to see it accomplished."—*Mr. James A. Seddon, in the Journal of the Western Society of Engineers.*

## ILLUSTRATIONS

[*Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.*]

ACCEPTED DESIGN FOR THE CITY-HALL, CONCORD, N. H. MESSRS. WARREN, SMITH & BISCOE, ARCHITECTS, BOSTON, MASS.

SIDE ELEVATION AND SECTION OF THE SAME.

"LOOP-THE-LOOP" ARCHITECTURE.

We copy this dizzy effort of Teutonic genius from *Architektonische Rundschau.*

UNITED STATES POST-OFFICE, LOCKPORT, N. Y. MR. JAMES KNOX TAYLOR, SUPERVISING ARCHITECT, WASHINGTON, D. C.

**[The following named illustration may be found by reference to our advertising pages.]**

TOMB OF MEDEA COLLEONI, IN THE COLLEONI CHAPEL, BERGAMO, ITALY. DRAWN BY MISS E. M. GREEN.

This plate is copied from the *Builder.*

**[Additional illustrations in the International Edition.]**

A HOUSE ON THE BAY STATE ROAD, BOSTON, MASS. MESSRS. LITTLE & BROWNE, ARCHITECTS, BOSTON, MASS.

"THE EMBARKATION OF CLEOPATRA": FRESCO IN THE PALAZZO LABIA, VENICE, ITALY. G. B. TIEPOLO, PAINTER.

DETAILS OF THE SAME.

"THE BANQUET OF CLEOPATRA": FRESCO IN THE PALAZZO LABIA, VENICE, ITALY. G. B. TIEPOLO, PAINTER.

DETAILS OF THE SAME.

## COMMUNICATIONS

[*The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.*]

### ORIGINALITY *VS.* TOMFOOLERY.

NEW YORK, N. Y., July 21, 1902.

TO THE EDITORS OF THE AMERICAN ARCHITECT: —

*Dear Sirs,*— Looking over your interesting weekly of July 19th, I was struck by your reply to an "exchange" on originality in architecture.

We all know that the primary colors have always existed and that the alphabet dates back a few thousand years, but still our artists and writers produce original works and surely no one will doubt the beauty of Shakespeare, though his very letters and words are identical to those of the Bible, the Iliad, etc. The colors of a Puvis de Chavannes are the same as of a Raphael; but no one will deny the claim to originality and beauty in Shakespeare and Puvis de Chavannes, and I cannot see why the underlying principles in architecture cannot be applied in producing results of equal beauty and originality. To discard the dictionary and the grammar, coin new words and new constructions, or to put the cart before the horse, or "to wear one's shoes on one's head," would be more accurately called *tomfoolery* than "originality." No branch of art or literature is more closely associated with man's life and pursuits than architecture and none more expressive and none more influenced by it; and consequently to produce beautiful and original works in architecture man must live beautiful, distinctive or original lives, and architecture must be made to conform to it and express it in all its phases; beauty and originality in architecture are results and not products, and therefore to strive for "originality for the sake of originality" is expressive of tomfoolery and not to be noticed. The lives of different nations that have lived beautiful and distinctive or original lives are wonderfully written in their architecture, as in the case of the Greeks and our own colonials, and while our Indians have been original their national life can hardly be called beautiful and their art clearly expresses it.

I might say that I am prompted in writing you this by a desire to arrive at the root of the argument, as I do not think the reply usually made that originality necessarily implies freak or absurdity elevates our profession, but rather stamps it as commonplace, and it would give me great pleasure to have your further views on the subject.

Very truly yours, ABNER J. HAYDEL.

[MR. HAYDEL very nearly expresses our views. Our quarrel is with those who make originalty not only their first, but their only aim, as for instance many of the expositors of "l'Art Nouveau." — EDS. AMERICAN ARCHITECT.]

### A QUESTION OF COMMISSION.

JAMESTOWN, N. Y.

TO THE EDITORS OF THE AMERICAN ARCHITECT: —

*Dear Sirs,*— Kindly advise me on the following: —

If a Boston architect is requested to make rough sketches of a parochial-school building, "subject to the approval of the building-committee" and not to exceed $14,000, and submits sketches which are rejected by the building-committee on the ground that the arrangement is not suitable, and also that the building would cost very considerably more than the specified sum, is he entitled to a compensation, and, if so, how much? Your usually sound judgment and opinion in this matter will be highly appreciated.

This case, as you are aware, is a very old one, but I cannot recall having seen your opinion expressed on this vital question, and I am anxious to know to just what extent the architect is entitled to remuneration and to what extent the committee is liable under facts as stated above.

An early attention will be greatly appreciated.

Yours truly, INQUIRER.

[In general, an architect who submits sketches "subject to approval" is understood to agree tacitly that he will not claim any pay unless they are approved. In the present case, the agreement with the building-committee seems, in addition, to have included a covenant that the cost of erecting the building should not exceed fourteen thousand dollars, and failure to comply with this condition, at least within a reasonable margin, would entitle the committee to reject the sketches without paying for them, on the ground that a man who has agreed to furnish sketches for a building to cost fourteen thousand dollars does not fulfil his contract by furnishing drawings for one which would cost, say, twenty thousand; and his failure to perform his part of the agreement releases the other party from any promises that he may have made in consideration of fulfilment. We do not see, therefore, how the architect in this case can claim any compensation. — EDS. AMERICAN ARCHITECT.]

## NOTES & CLIPPINGS

THE TUNNEL BETWEEN SCOTLAND AND IRELAND. — The proposed railway-tunnel between Scotland and Ireland, judged as one element of the general schemes which are now being mooted for shortening the distance of the ocean passage between Europe and America, is placed in somewhat the same category as the late Austin Corbin's dream for the creation of a great terminal port at Montauk, at the eastern end of Long Island; there being this difference, however, that when judged on that ultimate basis to which all such schemes must come — financial practicability — the Scotland-and-Ireland tunnel is even less feasible than Corbin's project. The cost of the tunnel is estimated by the contractors at $50,000,000, exclusive of interest, and, as matters now stand, there is not nearly sufficient traffic, either freight or passenger, to enable the scheme, if completed, to earn interest on the cost of construction. Nevertheless, in view of the rapid growth of commerce and the vast accumulation of capital seeking investment, it is conceivable that conditions may arrive in some future day that will guarantee the construction of a 34½-mile tunnel such as this. The engineering features of the tunnel were discussed recently in a paper read by James Barton, M.I.C.E., before the International Engineering Congress at Glasgow. Of the three possible locations for the tunnel, the one selected lies between Wigtonshire, Scotland, and the Irish coast, at a point where the distance from shore to shore is within 23 miles. The maximum depth of water varies, according to the line selected, between 480 and 900 feet. The route forms a through line between Carlisle and Belfast, and has the advantage of providing the best route from Scotland to the whole of Ireland, and from the north of England to Ireland. The survey for the tunnel proper commences 5 miles from Stranraer railway-station and finishes 5½ miles inside the shore line of the Irish coast, the total length of the tunnel being 34½ miles. Leaving the tunnel, the line extends for 10½ miles to the city of Belfast. The total length from Stranraer to Belfast is 51½ miles, 34½ of which is tunnel, and 25 of it beneath the sea. The roof of the tunnel is 150 feet below the sea-bottom. The proposed heading is 7 feet high by 10 feet wide. It is expected that the portion of it which is driven through the Silurian will be cut as rapidly as the Simplon tunnel, while progress through the Keuper marls is expected to be more rapid. It is estimated that the whole of the heading would be completed in less than ten years, and the tunnel finished in about twelve years. This estimate is based upon a comparison of the speed of driving 4 notable tunnels. The Mont Cenis was driven at the rate of 6 yards a day, and at a cost of $1,120 per yard. In the St. Gothard the maximum speed was 10 yards a day, at a cost of $710 per yard. In the Arlberg the maximum speed rose to 12 yards a day, while the cost was reduced to $535 per yard; and it is expected that on the Irish tunnel, judging from the quality of the material to be passed through and the improved methods now being used on the great Simplon tunnel, the speed will be increased and the cost per yard reduced still further. As to the question of water entering the tunnel, although the uncertainty on this point is admitted, the author of the paper does not consider that the difficulty will be a serious one. No water-leakage in any great quantity occurred during the construction of the Severn or the Mersey tunnels, at least in those portions of these tunnels that were immediately beneath the sea; and it is believed that the sea bed below the Irish tunnel has probably closed all faults in the rock sufficiently to keep out sea-water in any but easily-handled quantities. The line will be operated electrically from power-stations located near the main shafts at each end of the tunnel; and it is proposed to run trains at a speed of 60 to 70 miles an hour, thereby reducing the time in the tunnel to about half an hour. — *Scientific American.*

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PLANTING ANTIQUE FURNITURE. — Occasionally one hears of an apparently honest countryman who plants sham antique oak in inns, farmhouses and cottages to ensnare the unwary; and then the prices that are obtained, after the reluctant consent of the family to part with the treasure "that belonged to grandmother," or "came from the big house," would gladden the heart of many a poor struggling broker who is trying to earn an honest livelihood. One of our leading artists told the writer that he had been "had" by a man dealing in pigs in X., a small village three miles from any railway, a very quiet place, and certainly one where the victim did not expect to find guile. This countryman would have dower-chests made from old oak, taking care that parts showing rottenness and age could be pointed out as a proof of genuineness, a place having been cut out for one of the large old locks and then partly filled up, a small lock some forty years old fitted, and half-broken old hinges added to secure the lid. These pieces would then be exposed in the yard leading to the sty as though of no value in their owner's eyes, and the action of the weather, mud and filth soon completed the artistic effect. Now, oak chests with quaint carving are always desirable pieces to possess, and when the artist, who was in the neighborhood sketching, casually asked a resident if he knew of any old oak, he was told that the pig-dealer had a rare old chest in his yard, which, no doubt, could be bought cheaply enough. Away went our connoisseur of oak, and found what purported to be a fine old chest decorated with most unusual carving, and having, moreover, linen-pattern panels. From the position it occupied, he imagined he could buy it for a sovereign; but the owner, used to dealing with men in various markets, chaffed the artist in bluff, honest fashion, and told him plainly he had thought nothing of it, but he was a dealer — a pig-dealer — and sharp as any one, and knew an artist-chap wouldn't want to buy an old thing like that if it wasn't worth more than he knew; and so on, until eventually he extracted £12 for the *trouvaille;* and, after an attempt to extract another five shillings for cartage, delivered it to the railway-company, who forwarded it to the artist's address in London. When, in the privacy of the studio, it was thoroughly washed and cleaned, it stood revealed a "fake," and a dealer who eventually purchased it from its disgusted owner for £3 candidly observed that he had given a very good price, as such things cost from the maker, when new and in proper condition for sale, £4 10s. — *Chambers's Journal.*

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THE LARGEST SCHOOL. — Which is the biggest school? A writer in *Sandow's Magazine* claims that the Jews' Free School, Spitalfields, is the largest school not only in London, but on earth. There are 44 classrooms for boys and 27 for girls. Each room is fitted as completely as modern invention can make it. The fact that the school has never been closed owing to the spreading of any epidemic indicates the sanitary perfection of the enormous structure, now covering two acres of ground.

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CAN'T RECOVER FOR DEATH IN ELEVATOR. — The Appellate Division of the New York Supreme Court has just handed down a decision affirming the judgment of the lower court and setting aside a general verdict in favor of the plaintiff in the case of Walter H. Griffin, against William De Forest Manice, owner of the building at the northwest corner of Pine and William Streets. Griffin was Secretary of the United States Fire Insurance Company, with offices on the eighth floor of the building. On December 6, 1898, while in the elevator of the building, he was killed by its fall to the ground floor. The defendant admitted the facts cited, but declared that the accident was not due to negligence. A jury rendered a verdict of $7,500, but Justice Russell set it aside. The opinion is written by Justice McLoughlin, with Justices Van Brunt and Ingraham concurring, and Justices O'Brien and Hatch dissenting. — *N. Y. Tribune.*

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DEEP BORINGS IN THE UNITED STATES. — The deep well-borings of the United States, made for water, oil and gas, are the subject of a statistical report by N. H. Darton, in the series of water-supply and irrigation papers of the United States Geological Survey. All wells 400 feet or more in depth are carefully listed; depth, diameter, yield per minute, and other characteristic data are given, and many instructive details are noted indicating for what purpose the borings were originally made, the character of the product obtained, and whether the wells are in use or abandoned. The large product of natural gas in the East and the West, the enormous output from the oil-fields, in California, Texas and the East, and the considerable and indispensable water-supply furnished by the deep wells on the plains and in the arid and humid States, make concise and accessible information of this nature valuable for economic and scientific purposes. — *N. Y. Evening Post.*

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DANGER FROM GAS-LEAKAGE. — An interesting discussion on gas-leakage and its possible effect upon health was held at a recent meeting of the New York County Medical Society. Annually in the large cities the gas-companies expect to have a leakage of over one thousand millions of cubic feet of gas. In recent years this has become much more dangerous in its possible effects than in the early days of gas-lighting, when ordinary coal-gas was employed. The gas produced in closed retorts by the destructive distillation of coal contained only a very small amount of the most poisonous ingredients, the carbon monoxid, or blue gas. Since water-gas has come to be employed almost exclusively for illuminating purposes the percentage of carbon monoxid present in illuminating-gas is over 30 per cent. There has been a suggestion in recent years that pure water-gas should be employed in cities for heating purposes. In order to be useful for illumination, water-gas must be carburetted — that is, saturated with certain naphtha derivatives. It is these substances which give the water-gas, as made at present, its characteristic penetrating odor. They also somewhat dilute the more poisonous gases which are present. The gas-expert who discussed the subject at the meeting referred to said that "if pure water-gas was to be supplied for heating purposes, the only safe place to live in New York City would be outside of it." Present conditions in our large cities add to the dangers of gas-leakage. Our pavements, especially in quiet residence streets, are usually asphalt, and are thoroughly impermeable. Gas that escapes from the mains is confined beneath the streets until it finds its way into the houses or into the sewers. There is no doubt that severe anæmias are becoming more frequent in city life. Dr. Lloyd pointed out at this same meeting that some of these anæmic conditions, associated with febrile temperature, malaise and headache, are traceable almost directly to sewer-gas. As it is well known that ordinary sewer-gas does not affect the health of workmen who are many hours each day engaged in the sewers, it would seem that only when large amounts of carbon monoxid find their way into the sewers, and thence into the houses, for the gas is highly diffusible, that so-called sewer-gas takes on such pathogenetic influences. — *American Medicine.*

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COACHING ON GOOD ROADS. — But apart from all other considerations, the true way of making roads was not understood. This was not gained until the beginning of the last century. Macadam was the genius who evolved it. It is that of to-day, familiar to everybody, by which a hard and elastic surface, admitting of easy repair, is gained by the use of stone broken to a uniform, cubical size and shape, and gently sloped in the laying from the centre of the roadway to the ditches or channels at each side. What it meant may be judged by the old coaching results that immediately followed. In 1803 the distances between London and Shrewsbury, 154 miles; between London and Exeter, 171 miles; and between London and Manchester, 187 miles, were each done in a day. The roads were well maintained by the Turnpike Trusts, which were invested with powers for construction, management, and repair, and for taking toll for this purpose at the once familiar turnpike-gates. These in turn have been done away with, and maintenance provided for by a district rate. — *London Globe.*

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## PUBLIC BUILDINGS

| | |
|---|---|
| City Hall, New York, N. Y. | Date 1803-12 |
| Old State House, Boston, Mass. | " 1748 |
| Pennsylvania Hospital, Philadelphia, Pa. | " 1755 |
| Carpenters' Hall, Philadelphia, Pa. | " 1770 |
| Independence Hall, Philadelphia, Pa. | " 1729 |
| Faneuil Hall, Boston, Mass. | " 1741 |

and others.

## CHURCHES

| | |
|---|---|
| King's Chapel, Boston, Mass. | Date 1749 |
| Seventh-day Baptist Church, Newport, R. I. | " 1729 |
| Christ Church, Alexandria, Va. | " 1767 |
| Christ Church, Philadelphia, Pa. | " 1727 |
| St. Paul's Chapel, New York, N. Y. | " 1764 |
| Old South Church, Boston, Mass. | " 1729 |
| First Church, Hingham, Mass. | " 1681 |
| St. John's Chapel, New York, N. Y. | " 1803 |
| First Congregational Church, Canandaigua, N. Y. | " 1812 |
| St. Peter's P. E. Church, Philadelphia, Pa. | " 1758 |
| Gloria Dei Church, Philadelphia, Pa. | " 1700 |

and others.

## IMPORTANT HOUSES

| | |
|---|---|
| Fairbanks House, Dedham, Mass. | Date 1636 |
| Royall Mansion, Dedham, Mass. | " 1737 |
| Philipse Manor House, Yonkers, N. Y. | " 1745 |
| Tudor Place, Georgetown, D. C. | " 179- |
| Mappa House, Trenton, N. Y. | " 1809 |
| Woodlawn, Va. | " 1799 |
| Mount Vernon, Va. | " 1743 |

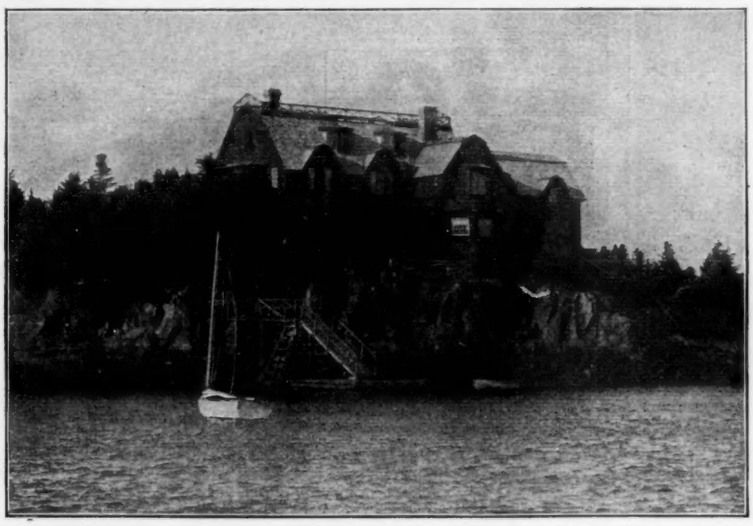
and others.

Incidentally there are shown special measured drawings or large views of the following features and details:

| | |
|---|---|
| Porches and Doorways | 67 Subjects |
| Staircases | 21 " |
| Mantelpieces | 81 " |
| Pulpits | 6 " |
| Fanlights | 60 " |

In addition to the subjects enumerated above there is a large quantity of measured and detailed drawings of Cornices, Ironwork, Gateposts, Windows, Interior Finish, Ceiling Decoration, Capitals, etc., together with elevational and sectional views of entire buildings.

AMERICAN ARCHITECT & BUILDING NEWS CO., Publishers, Boston, Mass.



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*John Lavalle, Architect, Boston.*

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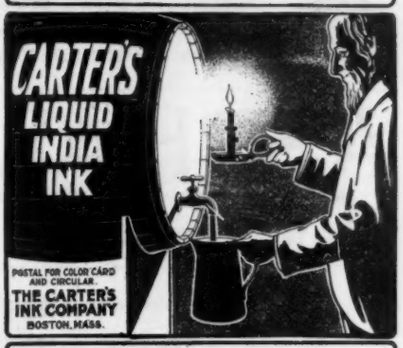


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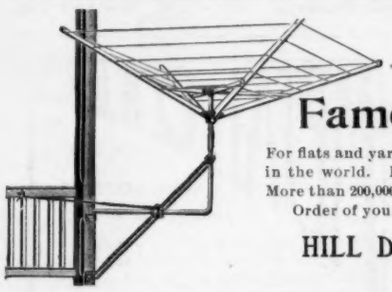

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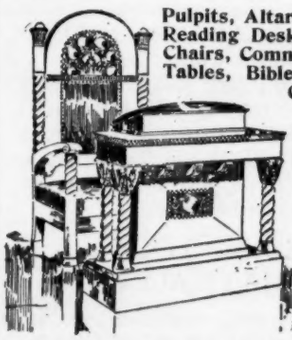

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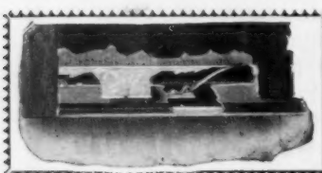

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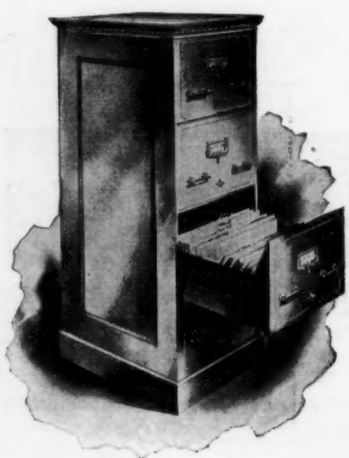

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The Bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

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**New Advertisements.**

ROBERT A. KEASBEY (New York, N. Y.), Insulation. Page xii.
WASHINGTON UNIVERSITY SCHOOL OF ENGINEERING AND ARCHITECTURE (St. Louis, Mo.), School. Page i.

**See last or next issue for the following advertisements:—**

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## BUILDING INTELLIGENCE.

(Reported for the American Architect and Building News.)

[*Although a large portion of the building intelligence is provided by their regular correspondents, the editors greatly desire to receive voluntary information, especially from the smaller and outlying towns.*]

### ADVANCE RUMORS.

**Ansonia, Conn.**—Plans by Architect W. H. Cadwell, of New Britain, are about ready to figure for the proposed new city-hall. It will be brick with stone trimmings and granite underpinning, 67′ x 108′, and will have steam heat; cost, $27,000.

**Atlanta, Ga.**—Willis F. Denny, Prudential Building, has drawn plans for a $25,000 business building to be erected on Whitehall and Alabama Sts. for H. Silverman.

**Auburn, N. Y.**—The Auburn Savings Bank building is about to be remodelled and enlarged at an estimated cost of $60,000, including elevators and all modern improvements. Architect, S. R. Hilger.

**Baltimore, Md.**—John D. Allen & Co., Betz Building, Philadelphia, have drawn plans and specifications for a hotel and two theatres to be built at F anklin and Howard Sts., this city, for a syndicate. The hotel will be nine stories high, 85′ x 95′, of fireproof construction and have 225 guest rooms. Cost of the building is estimated at $500,000. Plans will soon be ready for estimates.

**Bar Harbor, Me.**—Supervising Architect Taylor has opened proposals for site for a public building here.

**Bay City, Tex.**—A $250,000 irrigating company has been established here.

**Beaumont, Tex.**—A $100,000 oil company has been established here.

A $100,000 iron works has been established here.

**Boston, Mass.**—Permit has been granted to build a five-story $45,000 dwelling on Bay State Road for Chas. W. Hubbard, Treasurer of the Ludlow Mfg. Co., of Weston. Builders, G. H. Cutting & Co., Worcester.

**Buffalo, N. Y.**—Plans have been filed for a two-story brick school to be erected on Delavan and Bailey Aves. for St. Gerard's R. C. Church, to cost $25,000.

**Central Falls, R. I.**—With the approach to completion of the new plant of the Mossberg Wrench Co. on High St. there is reason to believe that there is a season of prosperity ahead for this section of the city such as has never been experienced before. This is apparent already on account of improvements which are being made by the owners of property in that vicinity. While the number of hands to be employed by the new concern is not considered large, it being said that 200 or 250 will be the limit, yet it is said that in the near future there will be a considerable increase in that number, providing the present plant proves successful.

**Charlestown, Mass.**—Plans have been drawn by Civil Engineer R. C. Hollyday for alterations to be made to the naval prison at the Charlestown Navy Yard. The basement will be remodelled for kitchen and laundry, and 150 prison-cells will be added; cost, $60,000.

**Chatham, N. J.**—Joseph W. Ogden, well known in banking circles in New York City, has taken the final steps toward carrying out an offer he recently made to build a new Presbyterian Church at this place. It is to be a memorial to his father, the Rev. Dr. Joseph M. Ogden, who was for fifty years pastor of the church here. The structure will be of the pink granite stone found in Northern New Jersey.

**Chicago, Ill.**—Plans are being prepared for the erection of a school of technology at Northwestern University, and the work of construction will be begun immediately after the return of President Edmund James from the East. What the building now projected will cost or whence the money for the erection or endowment is coming has not been told, but the name of William Deering is suggested in connection with it. President James will visit the Massachusetts Institute of Technology and the technology department of Cornell University on his present trip.

The Globe Mill Co. will erect a wall-paper plant on Halsted St., near 48th Ct., after plans by Architect Gustave Voigt, 3220 S. Canal St. It will be three stories high, of mill construction, with pressed brick front; cost, $30,000.

The plans for the enlargement of the big paint plant of the Sherwin-Williams Co., at Pullman, have now been completed in the general offices at Cleveland. The plant is located at 115th St. and will consist of a three-story structure, 63′ x 450′, and a three-story structure, 100′ x 150′. These two buildings will be erected at once and others are to follow, among them a gymnasium, yacht club-house and restaurant for the use of the employés. The entire improvement will involve an expenditure of about $300,000.

Carl Almquist, 112 Clark St., is the architect of a new plant to be built at 2349 51 Cottage Grove Ave. for the Davis Laundry Co. It will be two stories high, cover 50′ x 100′ and will cost $20,000.

**Cleveland, O.**—The School Council Bldg. Com. is stated to have purchased a site on Mill St. and will erect on same a $60,000 school.

**Columbus, O.**—The Ohio State University Trustees are stated to have decided to erect a new veterinary building to cost $35,000, also an addition to the Chemical Building, to cost $25,000.

**Concord, N. H.**—The plans of Warren, Smith & Biscoe, 110 Boylston St., Boston, Mass., have been accepted for the new city building to cost $100,000.

**Denison, Tex.**—A $30,000 flour and grist mill has been established here.

**Denton, Tex.**—The contract to prepare plans and specifications for a three-story and basement brick building, with stone foundations for the Girls' Industrial College has been awarded to Dodson & Scott, of Waco; probable cost, $45,000.

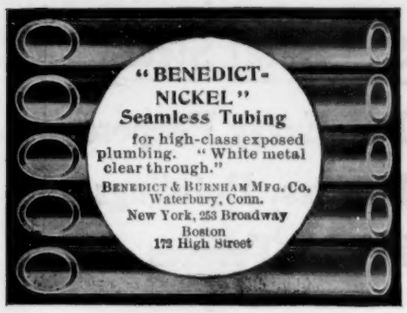
**Dobbs Ferry, N. Y.**—The New York Juvenile Asylum has awarded to York & Sawyer, architects, of 150 Fifth Ave., New York City, the commission to erect its new buildings at this place. This asylum has for a number of years been situated at 176th St. and Amsterdam Ave., but a few years ago it was decided to sell that property in order to move to the country. A plot of 300 acres here, most beautifully situated, was bought, and instead of housing the inmates in large dormitories they will be scattered among a number of cottages. The total number of buildings will be about 75, including a chapel, administration offices, gymnasium, laundry and the various cottages. About $1,500,000 will be spent in all.

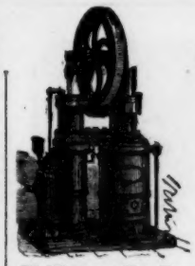
**Easton, Md.**—Architect T. Buckler Chequier, 227 St. Paul St., Baltimore, has plans in preparation and estimates will soon be taken on a Home for Aged Ladies to be constructed at this place. It will be a three-story building, of brick and stone and have all modern appliances.

**Fairmount, W. Va.**—A $100,000 coal and coke company has been established here.

**Fayetteville, N. C.**—A company has been formed with capital of $2,500,000, proposing to establish bleaching and finishing plants at different points in the South. The first one, costing about $200,000, is soon to be built here.

**Fort Lawton, Wash.**—Congress has appropriated $105,500 for buildings and headquarters here for one battalion of infantry, and $27,000 for one at Fort Wright.



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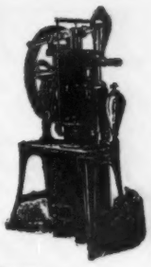

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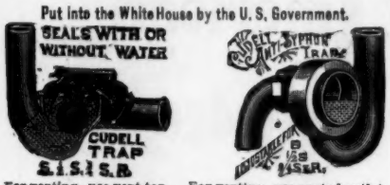


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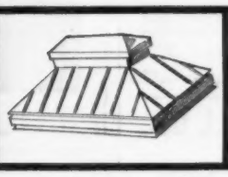

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## BUILDING INTELLIGENCE.

*(Advance Rumors Continued.)*

**Glenwood, Pa.**—It is said that the Baltimore & Ohio R. R. intend to reconstruct the bridge over the Monongahela at a cost of $200,000, contracts to be let in the near future. J. E. Greiner, Bridge Engr., Baltimore, Md.

**Greenwich, Conn.**—The contract for the erection of a fine residence at Field Point for Geo. F. Dominick has been awarded to J. P. Crosby. The cost of the house and for laying out the grounds will be about $100,000.

**Hartford, Conn.**—Plans have been completed by Architect Edw. T. Hapgood for a two-story brick and stone parish house, 50′ x 100′, to be erected for the Asylum Hill Congregational Church; cost, $30,000.

**Hope Mills, N. C.**—A $250,000 weaving and finishing mill has been established here.

**Huntington, W. Va.**—A $250,000 ice-factory has been established here.

**Indianapolis, Ind.**—Wm. P. Jungelaus, 827 Massachusetts Ave., has the contract for erecting the Bona Thompson Memorial Library, for $40,000.

**Jasper, Tex.**—A $20,000 brick works has been established here.

**Kalamazoo, Mich.**—C. A. Fairchild has completed plans for a brick apartment-house for Mr. Allen, of this city, to cost $35,000.

**Keyser, W. Va.**—An $80,000 table factory has been established here.

**Little Rock, Ark.**—A $50,000 oil mill has been established here.

**Madison Barracks, N. Y.**—For buildings here Congress has appropriated $180,750.

**Marblehead, Mass.**—Supervising Architect Taylor has opened proposals for site for a public building here.

**Menominee, Mich.**—The plans of Geo. M. Garnsey, 185 Dearborn St., Chicago, Ill., have been accepted for a $35,000 opera-house.

**Monessen, Pa.**—Anton Fritz is reported interested in the erection of a $75,000 opera-house.

**Monson, Mass.**—The general contract for the erection of the two and one-half story brick nurses' home, 84′ x 34′, at the State Hospital for Epileptics has been awarded to D. J. Curtis, 77 Everett St., Springfield; cost, $20,000. Kendall, Taylor & Stevens, 93 Federal St., Boston, architects.

**Munhall, Pa.**—The town is about to erect an 8-room school at a cost of $60,000. M. M. Mechling, sec'y.

**Newark, N. J.**—The Young Women's Christian Association of this city has purchased the property at 14 E. Park St., and plans will be drawn for a new building. The structure will be five stories high, containing a swimming-pool, gymnasium, reception hall, auditorium, library, etc.

**New Bedford, Mass.**—J. W. Bishop Co., 683 Atlantic Ave., Boston, have the general contract for the erection of the brick and stone armory at Pleasant and Sycamore Sts., for the Commonwealth of Massachusetts and this city. Cost, $125,000.

**New Haven, Conn.**—Prof. Russel H. Chittenden, Director of the Sheffield Scientific School of Yale University, has announced the gift of a plot of land and money for the building of a dormitory for that school. The donor is Frederick W. Vanderbilt, of New York. The value of the gift is placed at about $500,000. The ground is the square bounded by Wall, Temple, College and Grove Sts.

Richard Williams has prepared plans for a $25,000 addition to be built of brick and stone, for the Union League.

**New York, N. Y.**—It is reported that Henry Siegel has given $20,000 to the Building Fund Committee of the Stony Wold Sanatorium for the building of a dormitory. The gift is conditional upon the raising of a sufficient sum to furnish the building.

The State Commission in Lunacy has decided to have constructed in this city two psychopathic hospitals, one of which shall be in the Borough of Brooklyn. In these hospitals patients will be retained until the symptoms of insanity have been eradicated or clearly established. Dr. Frederick Peterson, President of the State Commission, has sailed for Europe, and while there will inspect institutions of the type which it is proposed to establish here.

Plans have been filed for a nine-story brick hotel to be erected on Broadway and 103d St. J. A. Pinchbeck, 674 Columbus Ave., is the owner, and H. A. Jacobs, 1133 Broadway, the architect; cost, $750,000.

**North Adams, Mass.**—Plans will be drawn by Architect J. McA. Vance, of Pittsfield, for the new three-story brick dormitory to be erected at the State Normal School; cost, $60,000.

**Oxmoor, Ala.**—A $100,000 furnace company has been established here.

**Pawtucket, R. I.**—The latest addition to Pawtucket's industrial list is the Vienna Braid and Tape Co., which secured articles of incorporation the past week. Harry W. Collamore and Edward M. Collamore, of Providence, and James P. Becker, of this city, are the incorporators, and the capital stock is $50,000. The new concern will make a specialty of the manufacture of tape and braid, and plans are well under way for the launching of the enterprise.

**Peabody, Mass.**—An appropriation of $95,000 has been made for a new high school, and a committee has been appointed to secure a site. A. Wells, 95 Milk St., Boston, chairman committee.

An appropriation of $125,000 has been made for a new reservoir, pumping-station and waterworks system at Spring Pond. Surveyors have made an estimate of the work.

**Philadelphia, Pa.**—Plans have been drawn by Hales & Ballinger, architects and engineers, 1200 Chestnut St., for a business building to be erected for F. W. Ayer, of N. W. Ayer & Co., Advertising Agents. Plans call for a seven-story and basement structure, to be erected at 8th and Sansom Sts. It will be of combination steel-frame and slow-burning construction, and will be of light gray brick, with terra-cotta trimmings.

**Portland, Me.**—A new brick building, 60′ x 52′, for surgery purposes, is to be added to the Maine General Hospital.

A modern 6-apartment block is to be erected at 145 Spring St. for the Lynch Estate. Wm. Burrows, 113 Kennebec St., has the contract for the erection of the building, and the plans were prepared by Architect F. A. Tompson.

**Providence, R. I.**—Architects Hilton & Jackson, 75 Westminster St., have designed a two and one-half story frame double residence to be erected on the East Side; cost, $8,000. Plans will soon be ready to figure.

**Richmond, Va.**—The contract for erecting the Chesterfield apartment-house has been awarded to W. A. Chesterman, for about $230,000.

**Rockwood, Tenn.**—It is reported that the contract for the steel superstructure of the Tennessee Central bridge over the Cumberland, near Hyde's Ferry, has been awarded to the American Bridge Co. for $70,000. Total cost of bridge, $150,000.

**San Antonio, Tex.**—The congregation of the First Presbyterian Church will erect an edifice on Marlin and Navarro Sts., to cost about $50,000.

**St. Louis, Mo.**—The contract for erecting the Art Palace, the permanent structure at the World's Fair, is reported to have been awarded to the Goldie Construction Co. for $945,127.50. The building is designed to become a Louisiana Purchase Museum after the close of the fair.

The Church of the Ascension is stated to have purchased a site on Cates and Goodfellow Aves. and will erect a new edifice on same, at a cost of about $50,000.

A radical departure from the conventional style of such buildings is proposed for the new St. Louis post-office. Instead of having a building of the height usual in the crowded parts of a great city, it is proposed to have the St. Louis post-office one story in height, with a magazine floor for files and records. Special provisions will be made for the management of the rural free delivery business which has not figured in former construction. If one-story post-office buildings should become fashionable they would prove an expensive luxury.

**Stockton, Cal.**—The plans of Geo. Rushforth, McKee Building, have been accepted for a three-story high school, to cost $150,000.

**Syracuse, N. Y.**—Edwin L. Loomis, 604 Turtle St., has had plans prepared by Mervel D. Makepeace, Everson Building, for a six-story fireproof industrial building, to be erected at Almond, E. Water and E. Washington Sts., to cost, including site, $100,000.

**Taunton, Mass.**—It is stated that plans by A. M. Marble, 9 Hamilton Pl., Boston, have been accepted for the proposed new county building to be erected here for the county of Bristol and State of Massachusetts. The plans will be ready to figure August 1. Building will be brick and stone, two stories high, 80′ x 160′, and cost $100,000. County Commissioners, Wm. R. Black, this city; John I. Bryant, Fairhaven, and Geo. T. Durfee, Fall River.

**Washington Barracks, D. C.**—A press report states that about $1,115,000 has been appropriated for the improvement of the military reservation known as Washington barracks, and of this sum about $400,000 is to be utilized in the construction of the War College building.

**Washington, D. C.**—It is stated that a new edifice is to be erected on 16th and Madison Sts., for the Foundry M. E. Church, to cost about $150,000.

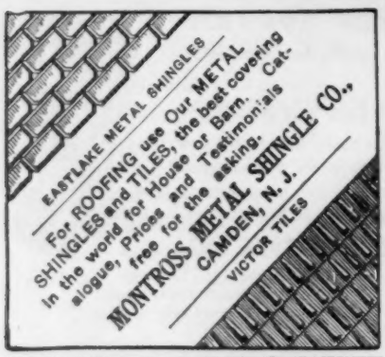
Levi P. Morton is stated to have taken out a permit for the improvement of the Shoreham Hotel on 15th and H Sts.; estimated cost, $200,000.

**Waterbury, Conn.**—Architects Griggs & Hunt have drawn sketches for a six-story hotel to be erected at Bank and Grand Sts. There will be eleven stores on the first floor, and the entire cost of the building, including the site, will be $250,000.

**Waterville, Me.**—A new city building is to be erected.

**Westfield, Mass.**—Plans submitted in competition by Architect E. C. & G. C. Gardner of Springfield, have been accepted for the new dormitory at the State Normal School. Will be brick, three stories, 100′ x 150′, have slate roof, electric lighting, etc.; cost, $65,000.

**West Roxbury, Mass.**—The City Council has been asked for an appropriation of $17,500 by the trustees of the Parental School for the erection of a stable at that institution. C. P. Putnam, 30 Tremont St., chairman trustees.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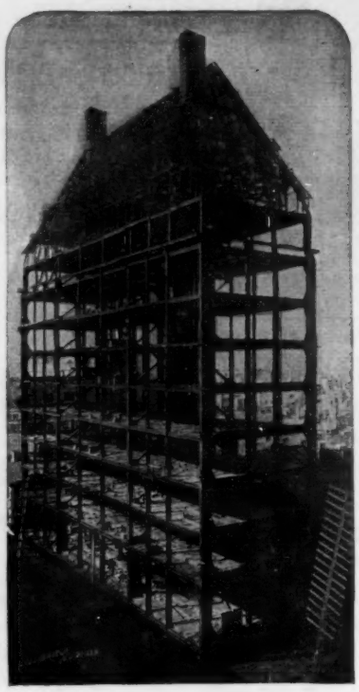

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## PROPOSALS.

**SEWERS.** [At Ardmore, Pa.]
Bids are called for **August 4** for constructing 41 miles of pipe sewers, sewerage disposal and pumping plant, etc. W. E. BARRETT, chairman committee. Chester E. Albright, engineer, Land Title Building, Philadelphia, Pa. 1387

**SEWER SYSTEM.** [At Lower Merion, Pa.]
Proposals for constructing a system of sewers for the Township of Lower Merion, Montgomery County, Pa., will be received **until August 4, 1902.** Applications for specifications, etc., must be made to WM. E. BARRETT, Chairman Health and Drainage Committee, Ardmore, Pa. Chester E. Albright, Civil Engineer, 908-9 Land Title Building, Philadelphia. 1387

**STORM SEWER.** [At Plainfield, N. J.]
Sealed proposals for doing the work and furnishing certain of the materials for the construction of a storm sewer in Arlington Ave., will be received by the Common Council of the City of Plainfield, **August 4, 1902.** Copies of plans, forms of proposal, specifications, contract and bond, may be examined at the office of the Engineer, 149 North Ave., Plainfield, N. J. JAMES T. MacMURRAY, city clerk. Andrew J. Gavett, engineer-in-charge. 1387

**JOINT OUTLET SEWER.** [At Newark, Irvington, S. Orange, Summit, W. Orange, Millburn and Vailsburgh, N. J.]
Sealed proposals for building Secton 3, First Division of the West Branch of the joint outlet or trunk sewer for the above named municipalities, extending from Union Ave., in Union Township, to a point in Millburn Ave. in the Township of Millburn, in accordance with the contract and specifications to be furnished by the Joint Meeting, will be received at the office of the Joint Meeting, Century Building, Newark, N. J., **August 7, 1902.** Plans and specifications can be seen at the office of the Joint Meeting, 142 Market St., Newark, N. J., and at the office of the engineer, 150 Nassau St., New York City. W. L. GLORIEUX, chairman. William Rollinson, secretary. Alexander Potter, chief engineer. 1387

**ADDITION TO SCHOOL.** [At Warren, O.]
Bids are wanted **August 4** for erecting an addition to the high school; probable cost, $30,000. 1387

**GRADING, ETC.** [At Portsmouth, O.]
Bids are wanted **August 5** for improving by grading and constructing necessary sewers, culverts and drains, several streets. B. C. BRATT, city engr. 1387

**COURT-HOUSE.** [At Marquette, Mich.]
Bids will be received by County Clerk Ross **until August 6** for the erection of a court-house; probable cost, $120,000. Charlton & Gilbert, architects, Hester Block. 1387

**APPROACHES TO BRIDGE.** [At Somerville and Medford, Mass.]
Sealed proposals for building the abutments and approaches for Wellington Bridge, Middlesex Fells Parkway, Somerville and Medford, will be received at the office of the Metropolitan Park Commission, 14 Beacon St., Boston, Mass., **until August 4, 1902.** Pamphlets containing further information for bidders, form of proposals, contract and specifications, can be obtained, and plans can be seen, at the office of the Engineering Department, 14 Beacon St. William B. De Las Casas, Edwin B. Haskell, Edwin U. Curtis, David N. Skillings, Ellerton P. Whitney, Metropolitan Park Commission. WM. T. PIERCE, engineer. 1387

**SIDE WALLS AND SEWER.** [At Boston, Mass.]
Boston Transit Commission. Sealed bids for constructing side-walls and sewer in State St., between India St. and Congress St., will be received by the Commission at its office, 20 Beacon St., Boston, Mass., **until July 31, 1902.** Plans can be seen and specifications and forms of contract can be obtained at 20 Beacon St., fifth floor. George G. Crocker, chairman, Charles H. Dalton, Thomas J. Gargan, George F. Swain, Horace G. Allen, Boston Transit Commission; Howard A. Carson, chief engineer. B. LEIGHTON BEAL, secretary. 1387

**SCHOOL-HOUSE.** [At Dorchester, Mass.]
The School-house Commissioners of the City of Boston invite proposals for erecting the primary school building, Westville St., Dorchester, Boston, Mass., **before 12 o'clock M., on Monday, July 28, 1902.** 1387

**ASPHALT PAVEMENT.** [At Washington, D. C.]
Office of the Commissioners, D. C., Washington. Sealed proposals will be received **until 12 o'clock, noon, Saturday, July 26, 1902,** for paving various streets and avenues with sheet asphalt. H. B. F. MACFARLAND, JOHN W. ROSS, H. C. NEWCOMER (acting), Commissioners, D. C. 1387

Treasury Department, Office Supervising Architect, Washington, D. C., July 18th, 1902. Sealed proposals will be received at this office until 2 o'clock P. M. on the 21st day of August, 1902, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Court-house, Post-office and Custom-house at Newport, Vt., in accordance with the drawings and specification, copies of which may be had at this office or the office of the Postmaster at Newport, Vt., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1388

**ROAD WORK.** [At Chicago, Ill.]
Bids will be received by Col. E. B. Atwood, Ch. Q. M., at the office of the Q. M., Chicago, **until August 12** for constructing a macadam road on Ft. Sheridan Military Reservation. 1388

**SEWER SYSTEM.** [At Monterey, Nuevo Leon, Mex.]
Bids will be received by the governor of Nuevo Leon **until August 15** for the construction of waterworks and a sewer system for Monterey. The cost is estimated at $3,000,000 Mexican money. P. BENITEZ LEAL, governor. 1388

**WIRE AND STAPLES.** [At Washington, D. C.]
Department of the Interior, Office of Indian Affairs, Washington, D. C. Sealed proposals will be received at this office **until August 11, 1902,** for furnishing and delivering at Chicago, Ill.; St. Louis and Kansas City, Mo.; Sioux City, Ia.; Omaha, Neb., or St. Paul, Minn., 414,000 pounds of cattle fence wire, two point barbed main wire not larger than 12½ gauge, barbs not larger than 13½ gauge, space between barbs not to exceed 5 inches, sample in one-rod lengths required; 5,860 pounds of wire fence staples, 1½ inch steel, galvanized; 17,350 pounds of wire fence staples, 1½ inch steel, galvanized. For further information apply to W. A. JONES, commissioner. 1388

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**SEWERS.** [At New Orleans, La.]

Sealed proposals will be received **until August 12, 1902,** for the construction of approximately 98 miles of sewers and appurtenances, of which 8 miles will be brick sewers from 72 inches to 27 inches in diameter, laid from 10 feet to 24 feet in depth, and 90 miles will be pipe sewers from 30 inches to 8 inches in diameter, laid from 5 feet to 20 feet in depth. There will be approximately 1,150 manholes and 520 flush tanks. Specifications, general plans and blank forms of proposals may be obtained at the office of the Board, also may be seen at the office of Hering & Fuller, consulting engineers, 170 Broadway, New York. F. S. SHIELDS, secretary. Geo. G. Earl, general superintendent. 1388

**SEWERAGE CONSTRUCTION.** [At New Britain, Conn.]

Sealed proposals will be received **until August 18, 1902,** for the construction of Section 1 of the New Britain proposed disposal system, and includes building 31 filter beds complete, requiring the removal or handling of approximately 130,000 cubic yards of materials, the laying of about 7 miles of underdrains, one mile of 24″ main trunk feed sewer, 95 cubic yards of Rubble mason work, 2 screen chambers complete, ½ mile of effluent ditches, 1,000 cubic yards of screened gravel for driveways, 4,500 square yards of turfing, 19 manholes, together with many other parts and details as set forth in the specifications for this work. The above will be let in one contract. The City has bought or will furnish the materials entering into the construction of the work as set forth in the specifications. Plans, specifications and blank form of proposals may be obtained at the office of William H. Cadwell, engineer, 213 Main St., New Britain, Conn., after July 25, 1902. Address communications to W. H. CADWELL, 213 Main St., New Britain, Conn. 1389

**HOSPITAL.** [At Winthrop, Mass.]

Bids are wanted **August 7** for erecting a brick hospital at Fort Banks, Winthrop. A. W. CHASE, Q. M. 1387

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 11, 1902. Sealed proposals will be received at this office until 2 o'clock P. M. on the 19th day of August, 1902, and then opened, for the safety vaults, vault-doors and work incidental thereto in the U. S. Mint at Denver, Colorado, (new building) in accordance with drawings and specification, copies of which may be had at this office at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1387

Treasury Department, Office Supervising Architect, Washington, D. C., July 10, 1902. Sealed proposals will be received at this office until 2 o'clock P. M. on the 14th day of August, 1902, and then opened, for the installation of a conduit and wiring system for the U. S. Post-office Building at Hot Springs, Arkansas, in accordance with the drawings and specification, copies of which may be obtained at this office or at the office of the Superintendent of Construction at Hot

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***"Building Superintendence."*** Thirty-one papers, illustrated, beginning with No. 262.

***"Statics of Structures."*** Twelve papers, illustrated, beginning with No. 1093.

***"Hints for Builders."*** Five papers, beginning with No. 588.

***"Safe Building."*** Fifty-two papers, illustrated, beginning with No. 532.

Most of the issues of the American Architect containing the serials enumerated in the list above are still in print and can be supplied by us.

It is to be noted, too, that the further contents of the several issues named above are not without value to the purchaser.

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**PROPOSALS.**

Springs, Arkansas, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1387

**STEAM HEATING PLANT.** [At Fort D. A. Russell, Wyo.]

Bids will be received by Maj. J. W. Pope, Ch. Q. M., Denver, Col., **until August 2** for installing a steam heating plant in commanding officer's quarters at Fort D. A. Russell. 1387

**SEWERS.** [At Abilene, Kan.]

Sealed proposals will be received by the City Clerk of Abilene, Kan., **until the 6th day of August,** 1902, for constructing a system of public and district sewers for said city in accordance with the plans and specifications on file. Separate bids will be received at the same time for furnishing pipe for said sewers. Specifications, instructions to bidders and blank proposals, and a complete set of detailed plans and profiles will be kept on file at the office of the city clerk of Abilene and at the office of the Consulting Engineers, Burns & McDonnell, Postal Telegraph Building, Kansas City, Mo. P. H. HALLECK, Mayor. C. C. WYANDS, City Clerk. 1387

**ADDITION TO GUARD-HOUSE.** [At Fort Totten, Willets Point, N. Y.]

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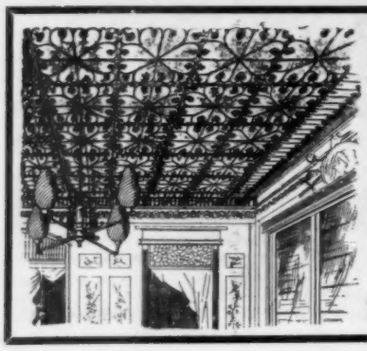

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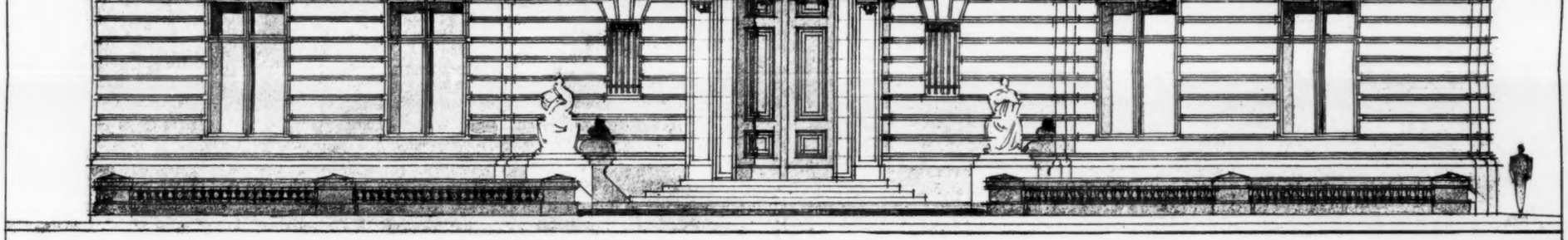

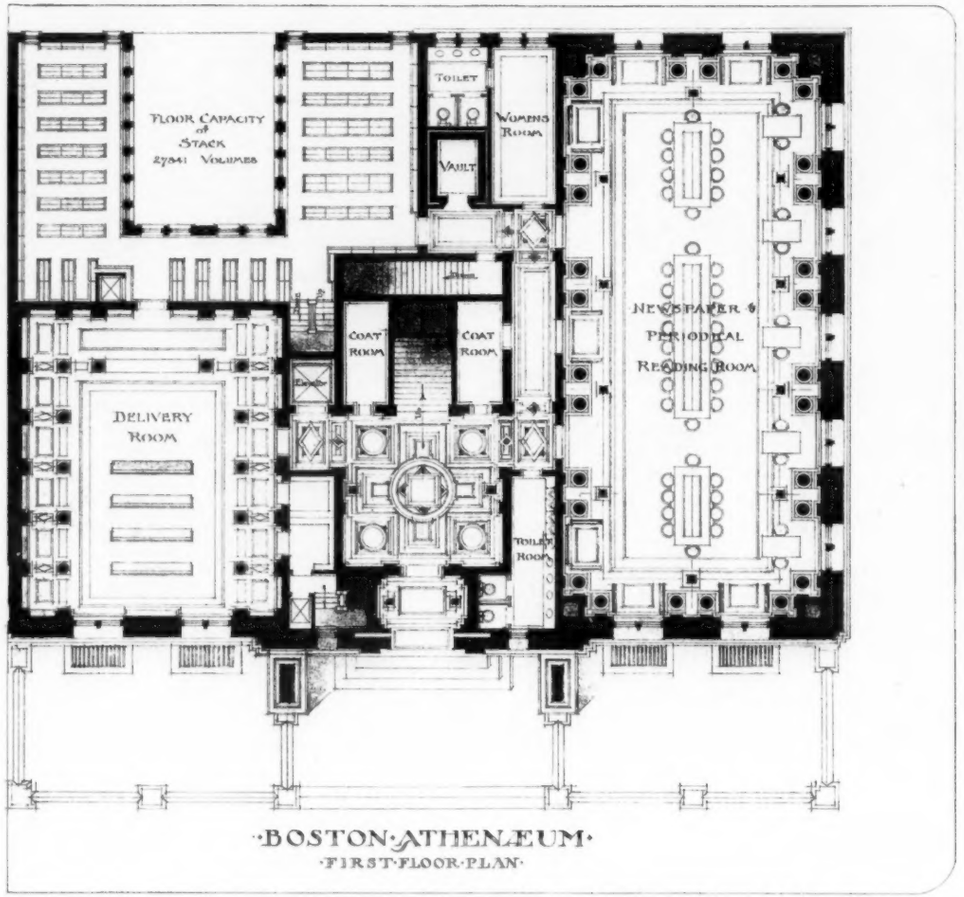


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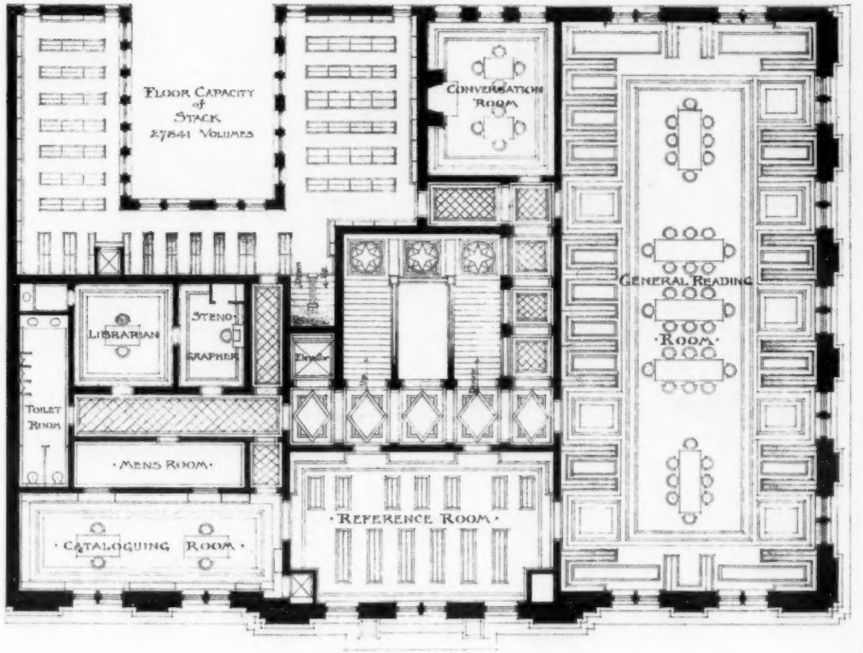


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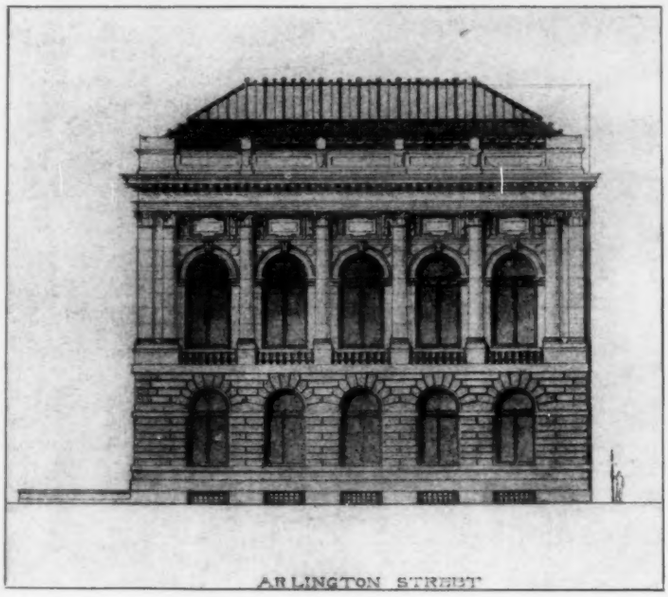

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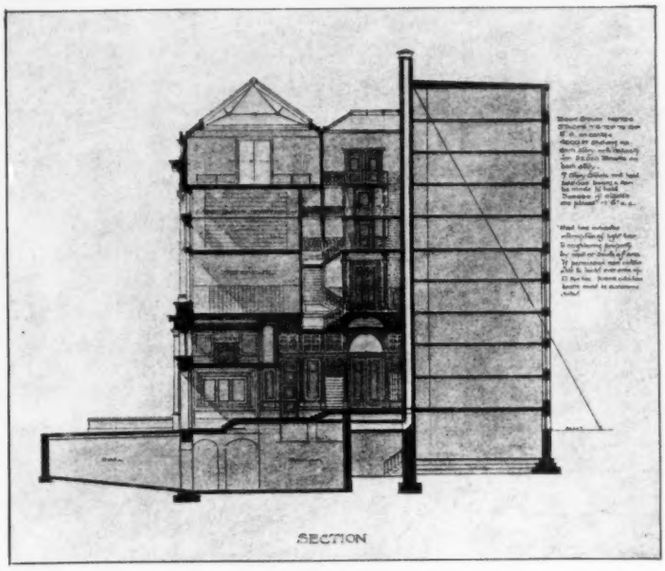

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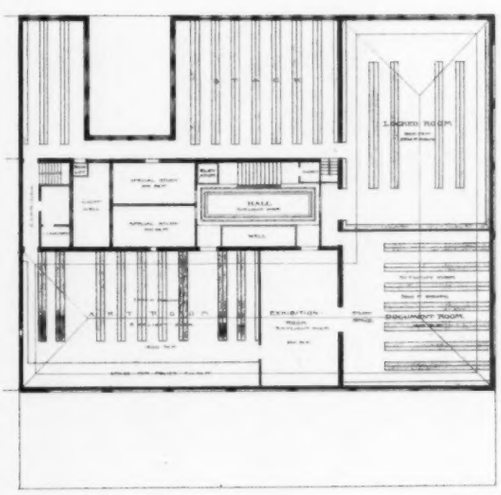


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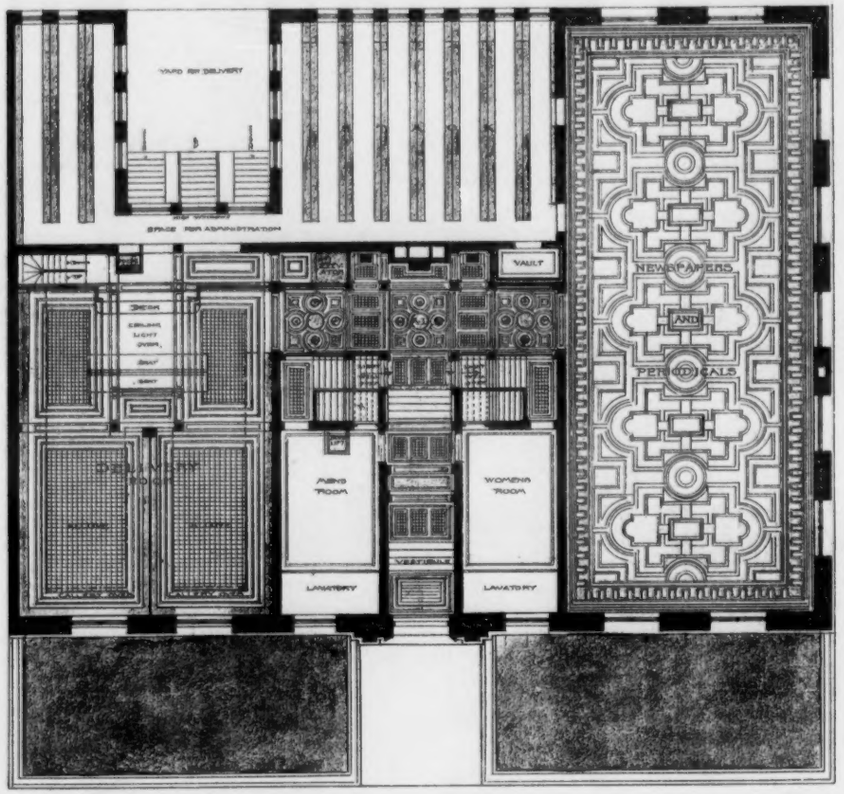


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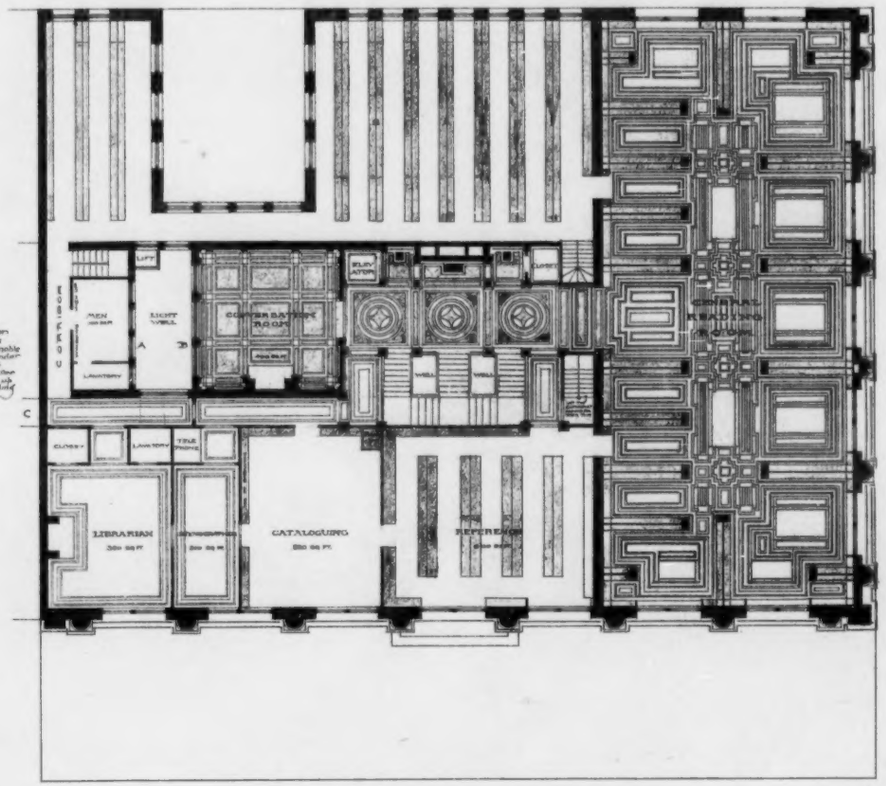


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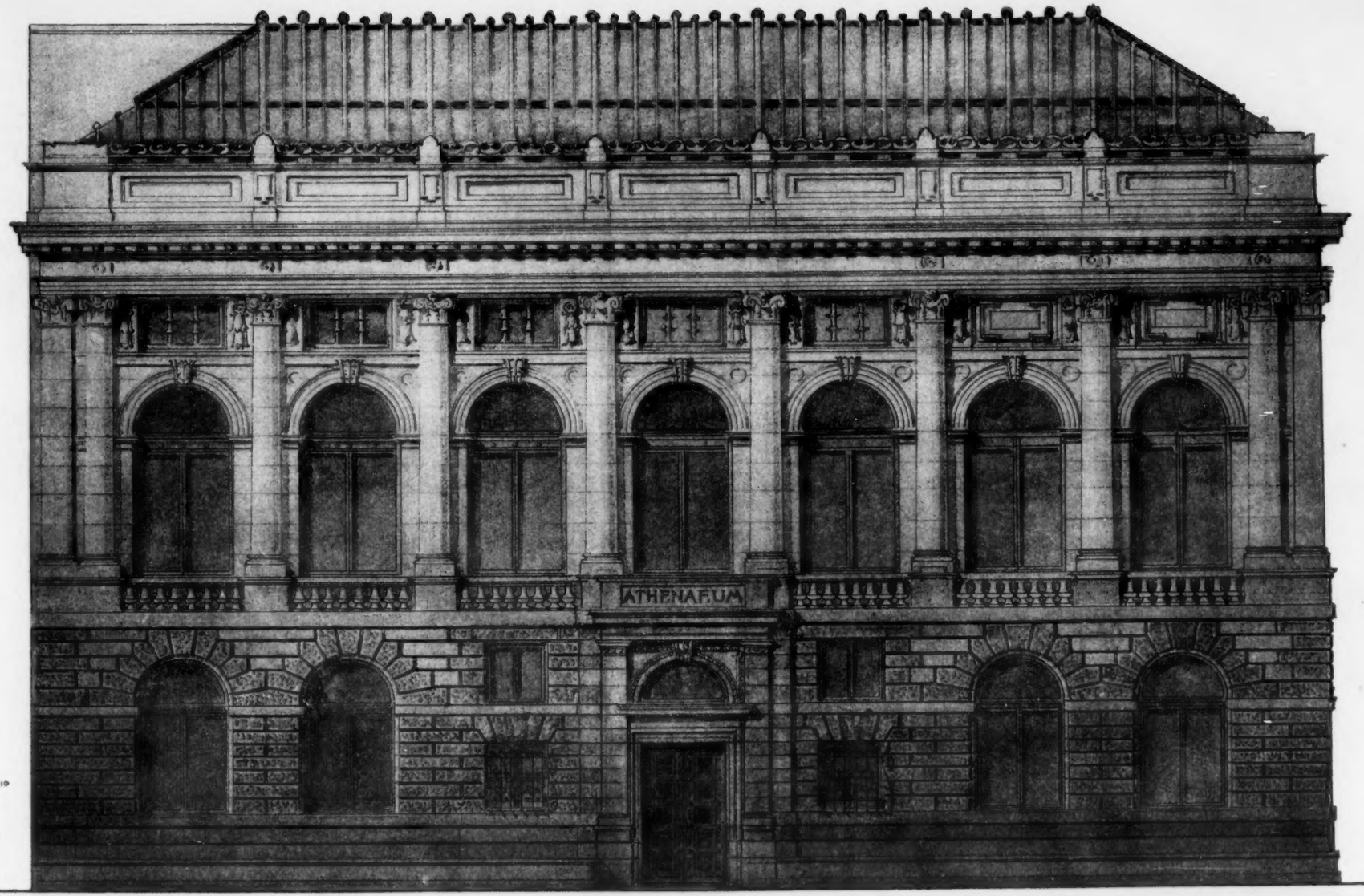


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